DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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FARM WORK FOR JULY.

"Our Saxon fathers did full rightly call
This month of July, 'Hay-monath,' when all
The verdure of the full-clothed fields we mow,
And turn, and rake, and carry off; and so
We build it up in large and solid mows.
If it be good, as everybody knows,
To 'make hay while the sun shines,' we should choose
Right 'times for all things,' and no time abuse."

July is usually a hot month. The sun has attained its extreme of splendor and heat; under its influence the buds and blossoms are developed into foliage and flowers, and captivate our senses by their exquisite structure, and delicious fragrance. The seed so lately cast into the ground has sprung into beautiful living plants, covering the earth with verdure and the promise of coming crops. Small as they then were, they now have produced plants weighing many ounces, and filled with life and beauty the open, barren blank of spring. None can have failed to observe this wonderful change, and lift the heart in gratitude to Him whose constant care is over all.

Late Sowing.—There is still something to be done in committing seeds to the ground. Cabbage and cucumbers may now be sowed for late pickling. Turnip seed scattered among the corn often produces a fine crop without material injury to the corn. Sow during or immediately after a gentle rain, and cover with a hand rake.

Grounds which it is desired to appropriate to grass may be conveniently laid down at the last hoeing by keeping the surface level, and sowing and raking in the seed as the hoeing is performed, while the moist earth is near the surface. Be liberal with the grass seed; every year's experience strengthens our convictions that the farmer is just about as wise in stinting his grass seeds as the commander of an ocean steamer would be in laying in a hundred tons less coal than necessary to take his ship to Liverpool.

If the grasses you wish to cultivate do not occupy the ground, others that you do not fancy so well will. There is no surer way to drive out white weed, sorrel, chiccory, dock and mallows, than to supply the grass seeds so liberally as to cover the entire surface with their stools. *Three pecks or a bushel* of red top and *twelve quarts* of herd's grass to the acre is little enough. Six or eight pounds of clover seed may be sown upon the snow in March.

Weeds.—Ah! here are our old friends again. But we cannot afford to keep them, though there is a world of beauty in each. Like all living things, they seek to perpetuate their kind, and will deposit countless thousands of their minute seeds to make sure a future crop. Faithful, constant hoeing only will prevent their being in the ascendant; and this continued for two or three years, dressing in the mean time with well composted manures, will eradicate them so that they will annoy little afterwards. The garden that has been tended with care must not be neglected now that haying and other duties press upon the strength and time.

Short Pasture.—The weather favorable for haying is not likely to keep the pastures green and luxuriant. The milch cows, therefore, require attention. They must draw upon something more nutrient than the east wind or pasture browse in order to present you full udders night and morning. Until the "cow corn" is fit to cut, give them a daily feed of shorts or oil meal with cut hay, or mow the patches of grass in rich spots where it would be likely to lodge.

Haying.—This is the prime work of the month, requires the closest application and taxes the health and strength severely. Let it be performed quietly and systematically, without hurry, confusion or noise; then it will be well done; and as you feed from your ample bays through the winter they will yield the fragrant perfumes of summer, and repay you in the fat ribs and glossy skins of your stock.

Health.—Do not be tempted to over-exertion. It is not by a few surprising efforts that the steam engine penetrates the solid rock, or lifts enormous

weights, but by quiet, unceasing application; and so must the farmer act in haying time—the more labor to be accomplished, the greater the necessity for system and carefulness. A sudden effort and haste often disables a hand for the whole season. Drink sparingly of cold water when heated—drink slowly, a swallow at a time, taking the glass away from the lips at each swallow. Retire early, and rise early, and while you labor in the cool of the morning, listen to the new voices about you; the bittern in the meadow, calling to his faithful mate in notes not unlike the noise made by pumping; the lark, whistling on the topmost twig of the old apple tree, and the numerous other voices peculiar to the fresh and delightful hour. Man, only, perverts nature in transposing the order of time for rest; the birds and beasts retire and rise early—

"Night is the time for rest;
How sweet, when labors close,
To gather round the aching breast
The curtain of repose,—
Stretch the tired limbs, and lay the head
Upon one's own delightful bed!"

Grass cut after the seeds are fairly formed is much more nutritious than when cut sooner.—Fields should be examined and a sound judgment exercised in regard to the proper time of cutting.

Grain.—This, too, will demand attention, and is better for being cut before the seeds are thoroughly ripe.

July is the commencement of the harvest of the year. Everything is in full vigor and activity.

"The vegetable world is all alive;
Green grows the gooseberry on its bush of thorn,
The infant bees now swarm around the hive,
And the sweet bean perfumes the lap of morn;
Millions of embryos take the wing to fly,
The young inherit, and the old ones die."

BONE DISORDER—SYMPTOMS—REMEDY, &C.

As the spring opens, many cows, and even young cattle and oxen, are developing the unmistakable effects of this widely prevalent disease. I am no professed veterinarian, Mr. Editor, but as my stock have suffered more or less from the disease, I have been led to study and read some upon the subject, and I will venture to make some remarks, and give a few hints upon it.

The foundation of the animal structure, the bones, and the inward apparatus for the support of that structure, by the purification of the blood, the lungs, are, in their more important sense, composed of phosphate of lime. Now this article is supplied to the system, by means of food, and is primarily drawn from the soil, by the process of vegetation. As its base (lime) is a mineral, the soil must contain this mineral, together with phosphoric acid, to feed the plant. In this section, when our lands are new there is a good supply of this in the soil, but after cropping extensively, the ingredients are withdrawn, and it is not replaced, the soil is said to be exhausted, and the herbage it produces will be *mostly* or *completely* destitute of phosphate of lime, as the circumstances may be. This is the condition of a great many of our summer pastures. Hundreds of thousands of tons of bone earth, in the form of bones and muscles, and milk, have been transported from our New England towns, to the cities and to foreign countries, and nothing has been brought back, to repay this constant draft. The recent important discoveries, showing the cellular tissues of the lungs to be in a large measure composed of phosphate of lime, and the actual benefits that have resulted in some cases from the application of this mineral in a medicinal form, go to confirm my preconceived opinions. If this mineral plays so important a part in the animal economy, a deficiency of it in the food must be attended with serious and often fatal results. That such food is often so deficient, chemical analysis has recently and frequently shown.

The *first symptoms* of the bone disease, so far as I have noticed, discover themselves in a loss of appetite, and a disposition to champ old bones, gnaw boards, rotten wood, and especially bits of old stable floors, on which horses have stood.—They have usually had a healthy appearance about the head and eyes, but shrink and fall away across the loins, and in extreme cases, become so weak in the back and spine as to wiggle in their posterior parts when they walk. When fed upon the best of hay, they seem to have no desire to eat it, but will often look at you earnestly for something more, and sometimes poor and mouldy hay, or straw, will be preferred to the sweetest hay, or to meal or roots.

In advanced stages of the disease, cows should be dried and turned into new pastures. All stock which are diseased by it, will recruit the best upon new pastures, that is, those that contain the elements, and produce "sweet feed," clover, herds grass and red top. Cattle feeding upon such grasses, will not champ hours upon old bones, or rotten wood. They should not be bled or physiced, they have not a particle of blood to lose. In winter feed them with oat meal, rutabagas, clover, &c. Potatoes and carrots are not so good, or Indian meal. If it can be procured, give a pint of bone meal twice or thrice a week; if they refuse it in meal, turn it down in water, mix it with their salt, and if they need it, they will soon learn to eat it. Save your bones, and boil some time in strong lye made of potash, or from the leach, or boil them with ashes and water to soften them, and in either case, throw them where they can resort to them daily, and they will help themselves to all they need. Do not fear that the lye or bones will hurt them.—*American News—Keene, N. H.*

THE WHITE NATIVE GRAPE.

You ask for some information relative to a white native grape, cultivated by me. I will give you, as briefly as I can, the history of it.

The banks of the Pawtuckaw (a small branch of the Lamphrey river,) abound with wild grape; so that in the space of two miles you may meet with twenty different kinds, all of which have originated from seeds, and from one of which this vine originated. The old vine appears to be sixty or seventy years old; it stands in a cold, rocky, uncultivated spot, and olimbs some large maples, flourishing without cultivation. I have known it for eighteen years, and never but what it has borne some every year. The fruit is from one-third to double the size of the Isabella with us;

it is rather of a drab color, but when very white of a reddish cast, quite sweet, and with a very white aroma. I have never known it mildew, which most of the white varieties are apt to do. The fruit is much larger on the cultivated than on the old stock, but it does not get its full flavor till the vines have borne two or three years, or till the roots get strong. It is perfectly hardy in our climate, and usually stops growing about the first of September. The fruit ripens about the middle of the month in common seasons, and will keep for some time. It is a good bearer: a neighbor has a vine about ten years old, (a layer from the old vine,) which for the last two years has borne more than three bushels each year of very fine fruit. When planted on the south side of a building, it frequently ripens a week earlier. They are now scattered through the whole of New England, and one lot in New York. About two years ago I planted some small vines on a high, dry knoll in the open field to test their growing on high, dry ground, and I have never seen any grow better. Whenever I have sent the fruit as a specimen, it has invariably given perfect satisfaction; and should it prove adapted to the wants of the people, I shall feel myself richly rewarded for my trouble.—*Plow, Loom and Anvil.*

For the New England Farmer.

HOW TO PRESERVE VINES FROM BUGS.

Mr. Editor:—As the season has arrived when bugs commence their depredations upon squash, pumpkin, cucumber, and sometimes other vines, perhaps some of your numerous readers would like to hear of a *simple* way to prevent this evil. Two years ago, I planted a piece of ground with vines, of the kinds above mentioned; they came up and began to look quite flourishing, but suddenly the bugs commenced operations upon them in good earnest. The bugs were of two kinds; mostly very small, striped with black and yellow, and a few large black ones, commonly called "pumpkin bugs."

I showered the vines several times with soap suds, but it seemed to do very little good. I then tried the effect of *common wood ashes*. After *wetting* the vines (if they were dry,) the ashes were *sprinkled* upon them until the leaves were covered.

Unless there was considerable rain, or very high winds, the ashes would adhere several days, and when it had fallen off, if the bugs had returned, the vines were sprinkled again in the same manner as before. This was repeated as occasion required, until the vines were too large to be seriously injured by their enemies. The bugs were completely frustrated in their designs, and the ashes did not injure the vines in the least.

I applied ashes to my vines last year in the same manner, with like success, and have commenced doing the same this year, and I have no doubt the effect will be the same. Bugs are the most numerous in warm dry weather, and therefore the vines, at such times, should be looked to the more frequently. Yours, &c., S. D. W.

Groton, June 16, 1852.

☞ Mechanics should ever remember that punctuality is the life of trade.

For the New England Farmer.

POTASH WATER FOR TREES.

BY M. M. COFFIN.

Messrs. Editors:—Much is said at the present time in many of our public journals, recommending a solution of potash in water as a wash for fruit trees. The recipes given vary somewhat, but the most common is, "a pound of potash to a gallon of water."

Mr. John Bachelder, of this town, on Saturday, the 5th inst., applied a wash as above directed—except adding a slight sprinkling of rye meal, to a fine thrifty orchard of his, consisting of *one hundred and six* Baldwin trees. On the following Monday he found, to his perfect astonishment, that he had completely *killed* his trees with this act of kindness. The bark of the trees above ground was crisped and the wood thoroughly saturated to the pith.

Some of our most distinguished orchardists have viewed the premises and are surprised at the result, whilst *all* must regard it as an unfortunate occurrence, a pecuniary loss to Mr. B., and a fact worth knowing.

From this the important question arises, was it simply the addition of rye meal that made the wash so destructive, or is there danger of making it too strong? We are of the opinion that a wash of potash and water alone, made as here directed, and applied to trees at this season of the year—that is to say, trees whose bark is thin and free from moss—*will kill them.*

Yours for the benefit of whom it may concern,
Hampton Falls, June 14, 1852. M. M. C.

Remarks.—We thank friend Coffin for his communication; it will be the means of saving many an orchard from the fate which Mr. Batchelder's has met. No recommendation to use the strong potash water for trees can be found in the columns of the *New England Farmer.* On the contrary, we have given recipes which we know to be valuable, and might be used even in unskilful and careless hands, without danger of destroying the trees. We have been shown trees repeatedly, washed with potash water of even less strength than "one pound to a gallon," where the effect was just what you describe it to be on Mr. Batchelder's trees. That potash water of the strength used on Mr. B.'s trees has been used many times with impunity, we do not doubt; and that it sometimes destroys them is well known. The best way, therefore, is not to use it of a greater strength than one pound of potash to two and a half gallons of water for young trees, and a gallon and a half or two gallons for old trees.

It is no small loss in time and money to have an orchard thus summarily ruined, and knowing the caustic power of potash, we have been extremely careful in recommending its use. Although potash water is highly recommended by some, we never use it, but use strong soap suds made of common soft soap and find all the advantages from it which we have expected to derive from any wash.

A GEM.

With two or three exceptions, we have never read a volume of what is called poetry in course, and probably never shall. Yet we ardently love *Poetry;* think we can see it all around us in our daily walks, and constantly feel its force. Many persons have poetic ideas, but He who framed us has seen fit to impart to a few, only, that nice selective and discriminating power over language indispensable to the true poet. This power must be coupled with an exquisite sense of ryhthm which will move the appropriate language in regular successions, flowing as it were upon the peaceful currents of the soul, or rousing its energies at will. Johnson and Pope wrote poetry, exact in measure and strong as iron bars; yet, had they written till this time, they could not have produced anything like the gem we give below. Scott and Byron and Wordsworth wrote beautifully, and passages of surpassing power may be found in them all; but their great volumes, as a whole, savor too much of the "machine." Mrs. Hemans, Tennyson and Motherwell wrote in a different vein—the heart and affections are more apparent.

We had rather be the author of this nameless, unclaimed effusion, than of many pretending volumes. Is n't it a gem?

Clear had the day been from the dawn,
All chequered was the sky;
Thin clouds, like scarfs of cobweb lawn,
Filled heaven's most glorious eye.

The wind had no more strength than this,
That leisurely it blew,
To make one leaf the next to kiss,
That closely by it grew.

The flowers, like brave embroidered girls,
Looked as they most desired,
To see whose head with orient pearls
Most curiously was tyred.

The rills that on the pebbles played
Might now be heard at will;
This world the only music made,
Else everything was still.

And to itself the subtle air
Such sovereignty assumes,
That it received too large a share
From Nature's rich perfumes.

For the New England Farmer.

HILL FARMING.

Much of the hilly and stony ground of New England bears in its surface-peculiarities a strong resemblance to the hill country of Syria, which once supported a population far greater than we have reason to believe was ever supported by any other land. It therefore becomes an interesting inquiry, how that uneven country was ever made capable of feeding and sustaining such a vast population; and it is particularly so, when we consider that so much of it remained wild, even in the day of its greatest prosperity, that wild beasts were very numerous, and very dangerous to the property of the shepherds.

The astonishing fertility of the land of Palestine, as an unquestionable fact of history, calls up the inquiry, How was it so?

The cultivators of our stony hills complain that they cannot raise their lands to great fertility, because they are so washed by the heavy rains. But in this they suffer no difficulty which the people of Palestine were not subject to. The storms were so furious in that land, that the houses, the villages and cities, were built upon high ground, and, to a good extent upon rocky summits. The storms to which we are exposed, and the washings of our hills, are certainly no worse than those in that celebrated land.

The peculiarities of their agriculture were, in many respects, the same two thousand years ago, of the other nations of the east. Their implements of husbandry were such as none among us would consent to use. Still, the unquestionable evidences are before us, of the extreme productiveness of the land of Palestine. This we would inquire into.

Two peculiarities of their management are entitled to our present attention. The first is, their artificial preservation of their soil from washing down their hill-sides. They did not gather away to a distance the stones that were brought to the surface, and leave the soil to wash off until another multitude of the same kind were exposed, and then treat them in the same way. They ridged the stones along the hill-sides, so as to serve as a dam to keep the soil from washing down. Thus they kept the soil from escaping, and all the decomposition of stones which took place under those circumstances of exposure to air and rain, served directly to enrich the entire soil. This was of far greater consequence than will generally be supposed. Every kind of rock is more or less rapidly decomposed by the action of air and rain, and all thus furnish properties which go directly to promote the growth of plants.

Many of our farmers have been for a long time casting every stone into some place of imprisonment, as though it never was to be regarded as anything else than an intruder upon the hill-sides. Their attention will be called to the question of the service which these intruders offer to the soil, when disposed of in the manner described.

Another of the peculiarities which I wish to notice, is that of fruit growing. In no land has the cultivation of fruit been more thoroughly attended to. The kinds of fruit which could be produced there were raised in the greatest abundance, and must have constituted an important item in the dependence of the people. And in the cultivation of fruit trees and vines upon their hill sides, they bound the soil together with millions of minute but efficient stays. The history of ancient days, and of the favor which rested upon Israel, even "HEALTH AND PEACE," is yet with us, and from it we may draw instruction. When the hill-farmers of New England shall take such measures to preserve the soil, and produce the necessary food for the support of man, they will rise to a high rank among earth's teeming millions. C.

Mason, N. H., March, 1852.

CARROTS.—From experience in their growth, and a close observation of their effects, we are prepared to say, that this is one of the best roots grown for the food of milch cows—and are justified in affirming, that the carrot is a highly nutritive root—that milch cows, fed properly with it,

yield more milk than when fed upon hay alone, yield it of a better quality, and, withal, thrive upon it; but carrots, as well as parsnips, sugar beets, or mangel wurtzel, or, indeed, any other roots, when fed to milch cows, should be mixed with cut straw, hay, or fodder of some kind; besides which they should be given other portions of long provender uncut, or cut, as the feeder may best like, by itself. When given roots, cattle, of course, consume less long food, but still they should receive such portion, as when added to the roots they may receive, will form an equivalent in nutrimental matter to a full feed of hay, fodder, or other long provender.—*American Farmer.*

HARVESTING WHEAT.

BY DANIEL LEE, M. D.

Many farmers cut wheat too late, (waiting until it is dead ripe) and still more permit the grain to remain a long time in the field in small stacks after it is harvested. Both practices are wrong. Wheat intended for seed ought to be fully ripe before it is cut; but that which is to be ground into flour should not stand too long. The proper time is to cut it in the "doughy state," out of the milk, but not hard or flinty. Where one has many acres to harvest, it is difficult to avoid cutting some a little too early, or a great deal too late.

So soon as the straw is sufficiently cured, the crop should be housed, stored away in a barn, or thrashed. Wheat straw is worth half the price of hay, if the grain be cut at the right time, and the straw properly saved from rain, dew and sunshine. Where good hay is cheap, say four or five dollars a ton, the saving of wheat straw for forage need not command much care. But at the South, where first rate hay is rarely worth less than seventy-five cents or one dollar per 100 lbs., the stems and leaves of all the cereal grasses should be preserved from damage by exposure to the elements, and used for wintering stock. Sheep are kept all winter on straw alone, by the large wheat growers in Western New York; and so are mares and colts and cattle. Good barns, sheds and stables are not so common as they ought to be, and no farmer who has the means to make these useful buildings should be without them. They will pay a high interest on their cost, greatly economize fodder, and operate to improve our live stock.—*Southern Cultivator.*

WHAT ANY DAUGHTER OUGHT TO BE.

In the Law of Spain written by Alfonso, "the wise," about the year 1260, there occurs the following passage. It is in a law respecting the duties of the governesses of the king's daughter:—

"They are to endeavor, as much as may be, that the king's daughters be moderate and seemly in eating and drinking, and also in their carriage and dress, and of good manners in all things, and especially, that they be not given to anger; for besides the wickedness that lieth in it, it is the thing in the world that most easily leadeth women to do ill. And they ought to teach them to be handy in performing those works that belong to noble ladies; for this is a matter that becometh them much, since they obtain by it cheerfulness and a quiet spirit; and besides, it taketh away bad thoughts, which it is not convenient they should know."

THE APPLE TREE BORER.

One of the greatest of all evils that the fruit grower has to contend against is the apple tree borer, which also attacks the quince, mountain ash, white ash, locust, hawthorn and the aronias. We have repeatedly called attention to their destructive habits, and have heretofore given the illustrations below, but as the evil is perpetual, so must our promptings be. Beside, some thousands of persons are now readers of the *Farmer*, that were not so, when these subjects were alluded to before.

This borer is the larva of the two-striped saperda, (*Saperda bivittati*,) which is truly represented by the following cut. This is the beetle or insect in its perfect state.

This figure shows the size of the insect. The upper part of the body is marked by two longitudinal white stripes, among others of a light brown. The face antennæ, the under side of the body and legs are white.

This beetle comes forth from the tree in June, in the night, flying from tree to tree for food or companions, resting in the day time among the leaves on which it feeds. In June, July and sometimes in August, it deposits eggs on the bark of the tree, at or near the ground.

The larvæ or young borers from these eggs are fleshy, round, whitish grubs, without legs. This grub eats through the bark, and remains there the first winter. The next season it penetrates the wood, throwing out dust or cuttings, like saw dust, by which it may be traced, generally ascending, as it proceeds, and boring deeper into the tree. Its whole passage is usually about 12 to 15 inches. It becomes a full grown borer as here represented.

The third season, nearly two years from its entrance, it approaches the surface, where it undergoes its final transformation, becomes a beetle and leaves the tree.

Rarely, the borer *gets off the track*, and descends; sometimes it enters the tree several feet above the ground, and seldom it enters the limbs of the tree.

Keep the trees well washed and the bark smooth,

and keep the grass, weeds, and rubbish away from the trees that they may be examined conveniently. During the time of depositing the eggs, wash the trees occasionally with a rather strong lye of wood ashes, or a solution of *one pound of potash to two gallons of water*. A strong lye is liable to injure the trees. These and other corrosive substances may destroy the eggs, or annoy the insects; but they are not always sure. The borers may enter between the roots that branch high, where washes do not affect, or the eggs may not be destroyed; therefore keep the trees smooth and clear of every thing around them, and examine them often; and when the young borers have just penetrated the bark, they are all easily destroyed. So attend to them the first season.

Make a wash of two quarts of soft soap, or whale oil soap, half a pound of sulphur and two gallons of water. Add also camphorated spirit, asafœtida, tobacco and other offensive substances, and wash the tree with it. A little clay or lime added will make a coating holding these substances, which may be offensive to the beetle or young borers, and prevent their operations.

After the borers have penetrated the trees they may be destroyed by running a wire or other flexible substance into the hole.

For the New England Farmer.

PEAT MUD—SEA WEED.

Mr. Brown:—I wish to make the following inquiries, which I would be happy to have you answer through the columns of your paper or otherwise.

I have a very valuable peat swamp on my farm, which is easy to get at with a team; I also live only six miles from an excellent sea-weed beach; I keep six head of horned cattle and a pair of horses; I have no barn cellar or manure shed, but want to make as much good manure as I possibly can this year. My land is a warm sandy loam. Now please tell me how to manage. I would like also to inquire if sea-weed is good manure for a young orchard. Also what is the best kind of plow for my land—it is very smooth—and the price of the same.

Where can I procure a full blood Devon bull calf, and at what price, delivered at Kingston depot, on Stonington and Providence railroad, or at Stonington depot, in Providence?

An answer to the above questions will greatly oblige, Yours truly, John Dimon.

Wakefield, June 8th, 1852.

Remarks.—If we had access to sea-weed we should spread and plow it in, in as green state as possible, while plump with all its juices. But if not convenient for you to use in this manner, pile it up, layer after layer, with your peat mud, and after it has remained a year overhaul the heap and mix with it such animal or special manures as you can supply. In this way you may make large quantities of excellent dressing. Sea-weed would be a good dressing for an orchard by plowing it in. Considerable land has been kept constantly under tillage and producing good crops for many years in New England, by a free application of sea-weed alone.

The Deep Tiller, No. 73, sold by Messrs. Ruggles, Nourse & Mason, we should think the suitable plow for your land. Full rigged with wheel and cutter, the price is $13,00. We cannot give you the information you desire at present, in relation to Devon bull calves, but advise you to communicate with B. V. French, Esq., of Braintree, Mass.

For the New England Farmer.

NEAT STOCK.

S. Brown, Esq.:—Dear Sir,—I have to acknowledge your favor of yesterday; and in reply, beg to say, that it gives me much pleasure to comply with your request, although at present I cannot find leisure to write an article for the press; yet I trust your friends may be able to make some use of the following plain statements.

The general stock of horned cattle in Nova Scotia is now very much improved by the frequent importation of pure blood Ayrshires, Durhams, Herefords and Devons; these breeds, crossed with the best of our old stock, has produced a profitable breed both for the dairy and the feeding stall.—The Ayrshire and Devon cattle are well suited to our upland districts; while our best alluvial lands support the Durhams and Herefords, without risk of degeneracy, provided that ordinary care is exercised. In the Dutch settlements there is a small compact breed of cattle known as the "Dutch breed." They are easily kept, make excellent working oxen, and the cows yield well to their size, and are particularly well adapted to light pastures.

Respecting the price of cattle, it may be stated that a fair milch cow, in her prime, is generally valued at £8, [about $5 is a pound.] Four year old oxen, when trained to the yoke, readily command from £18 to £20 per pair.

I think the average yield of our dairy stock may be fairly stated at 10 to 12 quarts per day in the milking season. I have often seen 20 quarts and upwards realized, and I have made 10 lbs. of butter per week from a cow, though this may be regarded as much above the average; 6 lbs. is considered good dairy yield.

If we do not produce butter and cheese equal to any made on the American continent, the fault lies in our management, not with the country.—Annapolis cheese and Cumberland butter are now far famed and deservedly popular. Nor is there any reason why other districts may not vie with these established patron dairy localities. Our rural population generally are very deficient in that pains-taking habit necessary to constitute a high grade of agricultural character.

Nova Scotia is, emphatically, a grazing country, though its natural advantages in this respect have yet to be improved. Our farmers have no defined system, no fixed purpose, nor combination of action. Each is doing a little of everything, and effecting comparatively nothing. Instead of mutual operation, it is too often regarded a virtue to cherish selfish motives and make a secret of practical management. Now and then we may find a fair

dairy stock, a pair of good oxen, a solitary attempt at amateur breeding, &c.; but in vain do we look for any system whereby Nova Scotian produce can attain that uniform character for high perfection which nature intends her to enjoy. To prove our facilities for prosecuting systematic agriculture, I may state the heavy rich lands bear a due proportion to the light uplands.

Young cattle can be raised in the upland districts at half the cost of their keep in the districts where land is of double the value. If these breeding districts would follow breeding only, and do it mutually and systematically, they would receive fair prices from the fattening districts, find ready sale at home, and save the money they now lose in their abortive attempts to make good beef; and the richer districts would save the valuable food for fattening which they now dissipate in raising young animals, which before they have their growth have cost as much per head as would purchase two head from the upland farmer, giving him a profit. Windsor, Horton and Cornwallis ought to supply Halifax with as good beef as can be found in any part of the world. By a systematic arrangement, the supply would be steady and uniformly good; salting ship stores and for export might be carried on as a branch of business, and the breeder, the feeder, the curer and the merchant would each approach perfection in their branches, and establish a steady, remunerative business.

Until our agricultural operations are characterized by system, it matters little what breeds of cattle we have. Unless we have some establishments within our own borders for pure breeding, our money must find its way to the pockets of foreign breeders every time we attempt to renovate our degenerate stock. At present I consider our labor and our animal food lost for want of mutual co-operation and systematic arrangement. Every good beef ox we see in the market has cost double what he should have done, and for every good animal we see, we ought to witness fifty.

System and combined action has rendered the mountains of Scotland as valuable as the alluvial plains comparatively. It is from the highlands that the Carse farmer procures his feeding stock; he could no more attempt to raise them profitably than the highland breeder could essay the feeding process successfully.

I trust you may be able to make sense of these hurried remarks, as I can hardly find time to throw them together. I fully appreciate your motives; they find reciprocity with me, and I trust you will favor me occasionally in the same way.

I am, dear sir,
Your obed't servant, JAMES IRONS.

Halifax, May 18, 1852.

REMARKS.—We thank our correspondent for his communication and obliging disposition, and hope to hear from him often. The number of our readers in the provinces will justify us in yielding a portion of our columns to their contributors, which we shall cheerfully do.

☞ A man with a large family was complaining of the difficulty of supporting all of them. "But," said a friend, "you have sons big enough to earn something for you now." "The difficulty is, they are *too big* to work."

For the New England Farmer.

OLD PASTURES—WITCH GRASS.

MR. EDITOR:—Will you, or some of your correspondents, please inform the readers of the *Farmer* the best method of reclaiming old pasture land that is too stony for plowing? And whether there is any way to kill out "witch grass," other than digging it out by the roots? By so doing you will greatly oblige a SUBSCRIBER.

Mercer, Me., June 12, 1852.

REMARKS.—In the monthly for May, page 233, you will find in an article on "Scarifying the Soil," some remarks upon reclaiming old pastures. But would it not be better, after all, to let pastures which are too stony to plow run up to wood and then give more attention to enriching lands which are capable of being plowed? One acre, well plowed, enriched and seeded to the various pasture grasses, would afford an abundance of feed for a cow for four or five months. Where farms are small and land high, we shall be compelled to pay more attention to pastures. Some of the best farmers in this region say that *one acre* ought to feed a cow through the year; that is, if a man has twenty acres, he ought to feed well twenty cows from it. We know those who do more than this, but the number is extremely small compared with those who require half a dozen acres for each cow.

There is a paragraph going through the papers, stating that if witch grass is covered with earth three or four times during the summer, while hoeing, that it will kill it. But we doubt. We have tried the most careful cultivation by hoeing and raking out every root we could gather, but found the next year that small pieces enough of the roots were left to bring up an abundant crop. Try late plowing in the autumn; and just before the ground freezes harrow thoroughly.

THE RADIATED OR STAR NOSED MOLE.

We received, not long ago, a specimen of the mole tribe, accompanied with a request to give the name of the "critter." This species of mole is oftentimes found very abundant in some situations. The peculiarity in this species is the singular cartilaginous appendages to the nose, which start out like radii from the nostrils as a centre, and present a star-like appearance. Hence it is called *radiated mole, star-nosed mole, button-nosed mole*, &c. It belongs to what naturalists call the genus *Condylurus*. We believe it is a very harmless animal which burrows in the ground and feeds upon worms and bugs, and such insects as it meets with in its haunts. It probably comes out from its burrow during the night, as it is not often seen in the daytime unless disturbed by the plow or the dogs. What the peculiar design of nature is in forming the singular appendages to the snout we do not know; but they probably aid it in its search for food. Godman, in his description of animals, says the star-nosed mole frequents the banks of rivulets and the soft soils of adjacent meadows, where their burrows are most numerous, and apparently inter-

minable. In many places it is scarcely possible to advance a step without breaking down their galleries, by which the surface is thrown into ridges.

The excavations, which are most continuous, and appear to be most frequented, are placed a short distance below the grass roots, on the banks of small streams; these are to be traced along the margins, following every inflexion, and making frequent circuits in order to pass large stones or roots of trees, to regain their usual proximity to the surface nearest the water.

In a state of captivity, they feed readily on flesh, either raw or cooked, and neither seem to show any fondness for, nor willingness to eat, vegetable matter.—*Maine Farmer.*

For the New England Farmer.

INSECTS ON GRAPE VINES.

Mr. Editor:—I have become a subscriber to the *New England Farmer*, and should like to make some inquiries through it, as they may be of some importance to the public; I have some beautiful grape vines, one about four inches in diameter, and has yielded fine fruit for several years past. Last May, when the buds began to start, I discovered that some insect was at work on them, and on looking closely, found a small, blue bug; it takes the bud as soon as it swells and eats out the centre and destroys it entirely. My vines now look as they usually do in autumn. I am afraid that it will entirely kill them; the like was never known in these parts before. If you can inform me whether it is common in any place, and what can be done to prevent them, you will very much oblige me and the public. A Westminster Farmer.

Westminster, Vt., June 14, 1852.

Remarks.—The rose bug has been the only enemy to our grape vines. Perhaps some of our correspondents can aid the "Westminster Farmer" in his difficulty.

WHITE WEED.

This troublesome production is sometimes known by the appellation of "Ox-eye," or "Ox-eye-daisy." It is a lover of rich deep soil, but like all troublesome plants, possesses, in a remarkable degree, the power of accommodating itself to almost every variety of soil, from the low, viscid and tenacious clays, to the lightest and most barren sands.

The plant generally matures its seed in June, and is ready to cast it before most of the grasses are in a condition to be cut for hay. As the seeds are very numerous and minute, the soil of course is pretty well replenished annually, and in consequence of this, the preponderance of the white weed over all other products soon secures it an hereditary and unalienable monopoly, which can be set aside and avoided only by force of arms, or "open revolution."

When it becomes necessary to extirpate it, the proper course is to turn it down with a deep and even furrow when in full bloom. Every head must be covered, and the land after being closely rolled, sowed with some rapidly growing crop that will stifle the pest, and prevent its again gaining a foothold. Buckwheat, which has a close habit of growth, is a good article for this purpose, so also is red clover. Both of these require to be sowed thick, as it is of vital importance to occupy *all* the soil, and prevent the reappearance of a single plant. If the soil is rich, or if manure can be afforded to make it so, herds-grass and clover, or indeed any other kind of grass, may be cultivated; but unless there is a liberal supply of soluble *humus* in the soil, the buckwheat crop is preferable, as it will do better on poor soil than any other cultivated crop.

On this subject an early writer in the *New England Farmer* says:—"We find no difficulty where the plow can run without interruption. In rocky grounds it is quite troublesome, and occupies space without yielding any harvest of value. In Cambridge large fields are covered with this weed—fields that are as easily plowed as any lands in the State. They are owned by *wealthy* proprietors who lease them from year to year for what they can obtain in cash, and make no provision for improvement."

Ox-eye makes a good hay when cut before it becomes fully ripe; but the great objection to it with most people, is that it makes but a light crop, and on poorish lands occupies the soil without any profitable return. On many affluent soils, and where the proprietor is able to keep them in good condition by annual application of manure, there is little difficulty in securing a good, if not a remunerating crop, especially in wet seasons.

For the New England Farmer.

PRACTICAL FARMING—NO. 3.

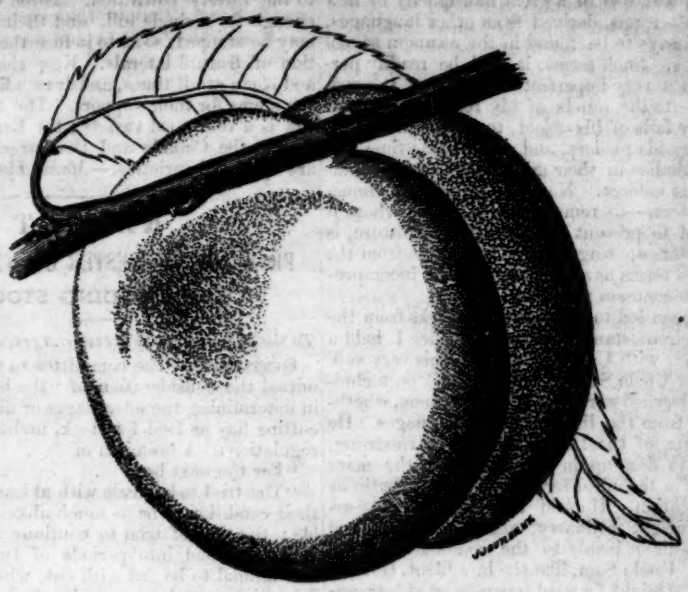
CARROTS.

Mr. Editor:—Considerable has been said of late in the *Farmer* about the value of carrots to feed to milch cows, and quite a difference of opinion seems to exist; and I will only say that I consider that they pay as well as any other crop, all things considered. Last year I sowed a small piece that produced at the rate of 650 bushels to the acre. I manured at the rate of 20 cords to the acre. I sowed in drills 18 inches asunder, part of them one foot apart in the drill and part 6 inches. Those that were one foot apart grew a little the largest, while those that were 6 inches, produced a little the most.

Some of them were four inches in diameter. Cost of cultivation (including manures) 16 2-3 cents per bushel. Such, sir, was the result of my experiment with carrots last year. S. Tenney.

N. Raymond, Me., June, 1852.

To Keep Bugs from Vines.—Eds. Cultivator:—I have tried ashes, plaster, lime, road dust and tobacco juice, with some success, but a spoiled clam, the cleanings of a wool-carding machine, or a lock of wool soaked in fresh oil, placed near the root of the vine, I never knew fail—these also promote the growth of the vine. The bugs are attracted by the smell of the vine, but do not like tainted fish.—*Albany Cultivator.*



THE SAFARU PEACH.

We have procured the above cut in order to place before those who are interested in the cultivation of the Peach, as many of the best varieties as we can command. There are a few established kinds so excellent and well known, that the cultivator who intends to set only a few trees had better select those about which there is no doubt. But those wishing to enter somewhat largely into the cultivation will be glad to avail themselves of engravings and descriptions of new fruits.

The only account we have of this peach is contained in the *American Agriculturist*, in which the writer states that, "while passing a few months on Teneriffe, some years ago, I was particularly attracted by the excellence of the peaches of that island. Among those of the finest quality was the Safaru peach, which, in point of flavor, smallness of stone, abundance of juice, and beauty of form, in the opinion of the Spaniards, is not equalled by any other variety. The size, color, and general external appearance, as far as my recollection serves me, greatly resembled Rodman's clingstone, denoted by the above cut.

"This peach is said to have originated in Spain about the middle of the IXth century, by the Arabian monarch, Abdurrahman. The envoy whom he sent to Syria for his two sisters, brought back many rarities, among which were some peaches from the gardens of Arrusafat. Being proud of this fruit, the monarch showed it to his friends, and presented one to Safaru-bu Ulbaid, who was so delighted with its flavor, that he preserved the stone, from which he raised a tree that ever after bore his name. This variety is still cultivated in some parts of Spain, and fully merits all the praise bestowed upon it.

For the New England Farmer.

TECHNICAL TERMS.

Mr. Editor:—Without wishing to appear fastidious, hypercritical, fault-finding or meddlesome in agricultural matters, I should like to make a few brief remarks upon the above subject.

It is well known to you, sir, and to most of your readers, that there is everywhere throughout the country a strong, wide-spread and deep-rooted prejudice in the minds of the people, against the frequent use of technical terms in explaining the science of agriculture. Would it not be well to inquire a little into the cause of this prejudice, whether it be real or imaginary, well or ill-founded; for, if we can discover its real cause, we may be able to do something to eradicate it, or, at least, to prevent its effects.

It will be generally admitted, I believe, that the use of a few old familiar technical terms is necessary,— is absolutely indispensable,— without which the science of agriculture could not be well explained or understood. These need not be here particularly mentioned. They are such as relate to the different kinds of soil, the composting of manures, and the agents employed in the production and growth of vegetables and animals. The simple use of a few necessary technical terms is not of itself alone an adequate or sufficient cause of

so general a prejudice. Something more is necessary to produce so tremendous an effect; and that is the frequent use of a great multiplicity of new and difficult terms, derived from other languages, and not always to be found in the common school dictionaries. Such terms, it will be readily perceived, are a very imperfect exponent of the writer's views to the minds of his readers. So that he entirely fails of his object, to make himself understood by his readers, and at the same time, excites a prejudice in their minds both against himself and his subject. Now the only way to remedy this defect,—to remove this prejudice where it exists, and to prevent its existence in future, is for all writers upon agriculture to abstain from the use of such terms as appear strange and incomprehensible to common readers.

I have been led to make these remarks from the following circumstance. Not long since I held a conversation with Uncle Sam, upon this very subject. Now Uncle Sam is "real death" on technical terms, learned words, and foreign idioms, whether derived from the living or dead languages. He reminds one of the late Lieut. Gov. Armstrong, who used to flare up in a moment at the mere mention of a technical term, law phrase, Latin or Greek quotation. He said that such expressions were downright pedantry, undignified, uncalled for, and a direct insult to the common sense of mankind. Uncle Sam, like the late Lieut. Gov., is an honest, straight-forward, open-hearted, strong-minded man; and if he had enjoyed the advantages of a public education, would have made a figure in the world. His principal objection to reading agricultural papers, is, that he is obliged to hold the paper in one hand, and his dictionary in the other; and then, he is not able to find out the meaning of all the words. MOUNT GRACE.

Warwick, May 5, 1852.

GROWING EARLY TOMATOES.

A friend a short time since requested me to look at a tomato patch belonging to one of his neighbors, which had been the year previous famous for the quantity of fruit produced, and its extreme earliness—by which the proprietor was enabled to sell in advance of all other competitors in the market, and thus realized as much profit from a few rods of land as some of our farmers from a hundred acres.

This plot of land was a sand knoll—the top of which had been removed to a depression near by, leaving the ground so poor that it would have been impossible to have grown any kind of cultivated vegetation except tomatoes. These were planted in hills prepared by adding a shovel full of well rotted manure to each, and the soil being of such a hot and dry nature, it brought them forward and matured the fruit directly. I have never before known this kind of fruit grown on such land, but the result in this case may furnish some hints to our market-gardeners which will be to their advantage.—*Rural New-Yorker.*

SQUASH.—As the squash is quite sensitive to cold, and the seeds frequently fail to germinate if overtaken by cold and wet weather soon after being planted, it is best to delay the planting until the weather becomes settled and the ground tolerably warm. The hills may be formed similar to those recommended for melons. The hills should be from six to ten feet apart, each way, according to the variety cultivated. Three vines are quite enough for a single hill, and their leading shoots may be stopped, so as to induce the speedy formation of fruitful laterals. Keep the surface light and clean at all times, and draw a little soil around the stems for their support. The Autumnal Marrow is a very good variety; the Early Orange, the Acorn, the Canada and the Large Green Striped are approved varieties.—*Maine Farmer.*

REPORT

FROM THE WORCESTER COUNTY SOCIETY,

ON FEEDING STOCK.

To the Trustees of Worcester Agricultural Society:

GENTLEMEN:—The committee to whom was submitted the consideration of "the best experiment in determining the advantages or disadvantages of cutting hay as food for stock, under the following regulations: A premium of . . $30

"For the next best 20

"The trial to be made with at least two animals, their condition to be as much alike as is practicable; the time of trial to continue at least eight weeks, divided into periods of two weeks each, One animal to be fed with cut, when the other is fed with uncut hay, and the feed of each to be changed at the expiration of each two weeks, and so alternately each two weeks, during the trial. If any other food, than hay is given, (such as roots or meal) the same quantity to be given to each, that the result in relation to the cutting the hay, may not be affected by other food. The animals should be kept in the same stable, that they may be in the same temperature, the average degrees of which is to be stated. If the trial is made with cows, the time of having the last calf must be given, and also the weight of milk given by each cow, during each period of the trial. Each of the animals to be weighed at the commencement of each two weeks, and at the end of the trial, and the statement must give an account of their condition, age and every other circumstance that can have any influence upon the decision of the question, and that the experiment may produce the most satisfactory results, the same kind of hay, (what is usually called English hay) should be used, during the whole time; the time of giving the food and drink should be regular, and also of the milking; the time of weighing should be in the morning, and before the animal has been allowed to drink.

"The statement must also give the quantity of hay, whether wet or dry, and other food given to each animal, and of each kind during each period of the trial, and to be forwarded and received by the Recording Secretary on or before the 15th day of March, 1852, to be laid before the Committee appointed, for their adjudication."

On or before the said 15th day of March a statement of a trial of feeding with cut and uncut hay, was received from Mr. Demond, of Grafton, with two dry cows; from Mr. Harvey Dodge, of Sutton, with two steers: from Mr. W. S. Lincoln, of Worcester, with two milch cows; and from Mr. A. H. Hawes, of Worcester with two working oxen.

The Committee was originally constituted by the appointment by the Trustees of Hon. George Den-

ny, Hon. John Brooks, and William A. Wheeler, Esq. After the decease of our lamented friend, Hon. George Denny, the Trustees enlarged the Committee by the addition of John W. Lincoln, Thomas W. Ward, and Charles Brigham, Esq. At the meeting of the Committee, on the motion of Hon. John Brooks, John W. Lincoln was appointed their Chairman. Subsequently the Hon. John Brooks handed to the Chairman a communication containing statements of a number of experiments made by him in relation to feeding of cattle, and for the purpose of ascertaining the quantity of solid manure voided by cattle in proportion to the weight of hay eaten by them. This communication contains much valuable information, of which the public should not be deprived, and is annexed to this report as an inportant part thereof, from which will be learnt the relative value of different articles of food, and the great importance, to the farmer, of making use of his hay, grain and stover as food for stock on his own land. Even those who have satisfied their own consciences by returning a load of manure for everyload of hay sold from their farm, will find that they have been robbing their land of three-fifths of the manure which of right belongs to it. Mr. Dodge, in a letter to the Chairman, states that during one of the periods of two weeks, his steers ate 508 lbs. of hay and 100 lbs. of meal, in which time all the solid manure was saved and thrown into a heap in the stable by itself; that at the expiration of the two weeks the manure was found to weigh 1136 lbs., and measured 25 bushels, potato measure.

The subject of feeding stock is of the utmost importance to the farmer, and although the books are full of recommendations of the use of the cutting machine, being the assertions of anonymous correspondents unsupported by facts, upon the particular question submitted to your Committee, they do not find that it has been discussed in the agricultural publications, or any facts stated that can have any application to it, except by inference. Of some of the most reliable statements in relation to feeding, they have made some extracts as containing information which may be useful to be understood by the farmers of our county.

In the fourth volume of the memoirs of "the Philadelphia Society for Promoting Agriculture," in a long communication from Richard Peters, entitled "Notices to a Young Farmer," he says, page 30. "Be particularly careful in expending, as you should be provident in raising, every species of provender for your stock of horses, cattle and sheep. A variety of food, and an orderly distribution of it, are more promotive of health and vigor in your domestic animals, than a lavish expenditure of any one species. Such as require previous preparation, should have it bestowed; both for profit and economy, *cut* or *chaff* your hay, straw, corn tops and blades, and even your stalks, with a powerful *straw cutter;* and you will save a great proportion, which is otherwise wasted, or passed through the animal, without contributing to its nourishment. One bushel of chaffed hay at a mess, given in a trough, three times in twenty-four hours, is sufficient for a horse, ox, or cow. A bushel of chaffed hay, lightly pressed, weighs from 5 to 5 1-2 pounds. A horse, or horned beast, thrives more on 15 pounds thus given, than 24 or 25 pounds as commonly expended (including waste) the usual manner of feeding in racks; to which troughs, properly constructed, are far preferable. This practice has been now tested by experience; and the result accurately proved." The name of Judge Peters, then the President of the Philadelphia Society for Promoting Agriculture, and one of the best practical and scientific farmers of his day, would ensure to his recommendations the highest consideration, but it is to be regretted, that he has not given the facts on which his opinion was founded. Farmers are generally so much prejudiced against all information that appears in print, that they will not believe, unless furnished with all the evidence in the case, from which they may draw their own conclusions.

In the Bath (England) Society's papers, re-published in the 4th volume of the *Massachusetts Agricultural Repository and Journal*, page 138, is a communication over the signature of Thomas Williamson. He says, "I have throughout the summer kept my horses in the stable, feeding them with good hay and beans. My oxen have, on the contrary, always been turned out to grass when liberated from their work; they have had the range of good pastures, and the benefit of some less valuable hay, previous to their going to their labor. My horses, five in number, have been regularly worked at the plow in pairs. The oxen, four in number, have worked in collars, drawing generally a stout Beverstone plow, or a large drag and scuffer; their labor has been constant and rather severe. As our meadows (mowing lands) began to fail us towards the end of September, owing to the quantity of stock upon them, it became necessary to allow the oxen more and better hay.

"The increased expenditure alarmed me, as the four oxen and the five horses consumed no less than four tons within one month. This caused me to prohibit the use of the hay in the racks, and to feed all the cattle with chaff; of which a boy can cut sufficient for daily use in two hours.

"My servants not only ridiculed the change, but so far as they dared, opposed in an underhand manner by various evasions and pretexts. Aided by the care and vigilance of the young gentlemen with me, the system of chaff-feeding was fully established, and the quantity needful for the horses, and for the oxen, separately ascertained.

"One hundred weight of hay was found to yield twenty bushels of chaff pressed into the measure, and piled as high as it could be safely carried; consequently each bushel weighed about 5 1-2 pounds. It was found that the five horses would eat twelve bushels of chaff during the twenty-four hours; and that the four oxen could consume an equal quantity in the same time. Ever since, the oxen have been fed with chaff only; they have very evidently improved in condition, as have also the horses, although their work has latterly been on heavier soil, and of course, more severe than formerly.

"Twenty-four bushels of chaff at 20 to the cwt. (112 lbs.) amount to about 21 1-2 tons yearly; which deducted from 48 tons (the quantity we were consuming within the year) gives a saving of about 26 1-2 tons, or more than one half.

"I have, however, carried the retrenchment further, by cutting in beanstalks, to the extent of about a quarter of the chaff. These being laid uppermost in the cutting trough, keep the hay well pressed, and cause it to be cut more regularly. Thus we now use about 25 cwt. of hay monthly, instead of four tons. It is customary in our quar-

ter to throw beanstalks under cattle, a practice which cannot be too speedily abolished. Mine had suffered much by standing out full a month in the late rainy weather, yet all my cattle ate the chaff from them alone, without hesitation; indeed, rather in preference."

On page 400 of the same volume of the *Massachusetts Agricultural Repository and Journal*, is the statement by Benjamin Hale, of the saving made by the use of the straw cutter employed to cut hay and straw as fodder for horses.

Mr. Hale was a proprietor of a line of stages then running between Newburyport and Boston. He says:

"The whole amount of hay purchased from April 1 to October 1, 1816, (six months,) and used at the stage stable, was 32 tons 4 cwt. 10 lbs., at $25 per ton, (the lowest price at which hay was purchased by him in 1816,) is...$800,00

From October 1, 1816, to April 1, 1817, whole amount of hay and straw purchased for and consumed by the same number of horses, viz.:

Straw, 16 tons 13 cwt. 3 qrs. 10 lbs.	$160,23	
Hay, 13 tons 4 cwt. 1 qr. 10 lbs.	350.00	$510,23
Deduct on hand April 1, 1817, by estimation, 4 tons more than there was Oct. 1, 1816, at $25	100	410,23
Saving by the use of a Straw Cutter 4 months of the last 6 months, or the difference in expense in feeding with cut fodder and that which is uncut		389,77
Whole amount of hay used for the horses of the Salem stage, twenty-five in number, from April 1 to October 1, 1816 – 22 tons at $30 per ton, the lowest price in Salem	660	
Whole amount consumed by the same number of Horses from October 1, 1846, to April 1, 1817,—		
Straw, 15 tons 13 cwt.	187,80	
Hay, 2 tons 15 cwt.	81	268,80
Saving in using chopped fodder 5 months	391,20	
Total saving in using the straw cutter in Newburyport four months	389,77	
Do. at Salem five months	391,20	
Total saving in both places, average time 4½ months,		$780,97

"The member of the board of Trustees of the Massachusetts Agricultural Society, to whom the above account was communicated by Mr. Hale, was informed by that gentleman that he used no more grain from October, 1816, to April, 1817, than was used from April, 1816, to Oct., 1816."

It will readily be perceived that the large amount of saving reported in this statement is greatly increased by the extreme high price of hay, during that year of scarcity. The saving of the last six months, over the former six months, although the cutter was in use but three-quarters of the time, is 53 per cent. Much of this saving is effected by the substitution of straw for hay, and a reduction in the quantity.

The quantity of hay used in Newburyport from April 1 to October 1, 1816, is 72,138 lbs.; from October 1, 1816, to April 1, 1817, is 37,390 lbs. straw and 20,636 lbs. hay, being less in weight by 19¼ per cent.; and reduce the straw to its equivalent value in hay, and it would be 6129 lbs., making the whole equal to 26,765 lbs. of hay, less than of the preceding six months by 64 per cent. in its nutritive properties.

The quantity of hay used in Salem from April 1 to October 1, 1816, was 49,230 lbs.; from October 1, 1816, to April 1, 1817, was straw 35,056 lbs., and 6160 lbs. hay; whole weight 41,216 lbs., being less in weight for the last 6 months by 17 1-4 per cent., and reduce the straw to its equivalent value in hay, which would be equal to 5763 lbs., and it would then be as hay 11,923 lbs.; less in value as hay for the making of muscle by 75 3-4 per cent. for the last six months, than for the former six months.

It would be extremely difficult to conjecture how so large a saving could be effected by the use of the cutter, without a very large allowance for waste during the first period. It is probable that the grain furnished all the nutriment required by the horses, and the straw was only wanted to fill up the stomach, for which it was as useful as hay.

It is much to be regretted that in this statement of Mr. Hale, all the facts in the case are not given; the horses should have been weighed at the commencement and at the close of the term of trial, and their relative condition might have been known; the quantity and quality of the grain, and the manner in which it was given, should have been stated, that the public might have the whole evidence in the case, on which they might have formed their own opinion. It might have appeared upon more careful examination, that these horses for at least a portion of the time were overfed, and that much of the food given them passed through them in an undigested state, and of course was of no benefit to them, or in other words was wasted. It is difficult on any other conjecture to account for the great difference on the two sides of the account. It is not intended to intimate that Mr. Hale intentionally withheld any facts within his knowledge; he doubtless stated all the circumstances of which he was informed by those in his employ, and finding that his savings had been so great, he was disposed to give the public the benefit of the information, supposing it to be as full as could be expected.

This statement of Mr. Hale has been copied into many of the agricultural papers with remarks of approval, which has occasioned disappointment on the part of those who have adopted the use of the cutter and have not realized so great benefits, as by this account they were induced to expect. For these reasons, we have been disposed to examine it more particularly, that farmers might be induced fully to inquire into all the circumstances belonging to a case before they form a conclusion either for or against it.

In the *New England Farmer*, vol. 12, page 233, is the following communication.

"*Beverly, Jan.* 25, 1834.

"Mr. J. R. Newell:—*Dear Sir*,—It is with pleasure that I comply with your request, asking the result of my experience on the subject of feeding stock. My stock consists of 51 head, viz: 8 horses, 6 oxen, 25 cows and two yearlings. This stock was fed in the usual way, with English, salt and fresh meadow hay, with meal and potatoes as their condition required, to the 1st of December last, at which time I commenced chopping my hay. In giving the result of my experiment I must in some measure ask the privilege of a Yankee, viz., that of guessing; but in this case I think I can guess pretty correctly, as much of the hay has been loaded in consequence of having to remove it from one barn to the other, and calculating the number of days a load would last, the result is as follows:

700 lbs. English hay, at $16 per ton	$5,60	
200 lbs. fresh hay, at 4 "	,40	
100 lbs salt hay, at 8 "	,40	
3 bushels corn meal	2,25	
8 " long red potatoes	1,60	
		$10,25 per day.
400 lbs. English hay chopped, at $16 per ton	3,20	
100 lbs. fresh hay, at $4 per ton	,20	
100 lbs. salt hay, at 8 "	,40	
3 bushels corn meal	2,25	
4 " long red potatoes chopped	,80	
140 gallons pure water	,00	

1 man at $8 per month.....31
Board of man at $1,50 per week.....23

$7,39 per day.

Balance in favor of Straw Cutter, $2,86 per day.

In addition to the above balance may be added an increase of six gallons of milk from 25 cows then in milk, and likewise something for the improvement of the condition of my whole stock.

Yours respectfully, AMOS SHELDON."

In a communication of Finlay Dun, Jr., of Scotland, to the Highland Society of Scotland, for which he received a Gold Medal, he says in relation to the quantity of food to be given to cattle. "It is found from experience that a healthy ox consumes nearly one-fifth its own weight of hay, straw, and such other dried food. Cattle 50 stone imperial weight allowed straw *ad libitum* will consume from 150 to 180 lbs. of turnips daily." Boussingault considers as a sufficient allowance 6 lbs. of mixed food or 4 lbs. of hay, for every 100 lbs. of living weight; or otherwise, about 30 lbs. per day of a mixture of equal parts of grass and hay for cattle of 30 stone imperial weight. The food of cattle requires to be of a certain *bulk*. Without this, digestion and assimilation are not properly performed, even although the food be sufficiently nutritive. In order that digestion be effectually performed, the stomach must have certain mechanical stimulus, which the bulk of the food naturally imparts to it. But the quantity of food necessary to an ox must of course be greatly modified by various circumstances. It is evident for instance that young animals, in proportion to their size, require a larger quantity and a better sort of nutriment than adults. This depends upon their having to increase the size of all the parts of their frame, as well as to repair the continual waste, which is also greater in them than in older animals, on account of their taking a greater amount of exercise.

"At all ages, exercise greatly increases the demand for food, and prevents the accumulation of fat. A man, when employed in active outdoor labor, requires a much more nutritive diet, than when pursuing a sedentary occupation within doors. Working cattle also require a larger quantity and a more nutritive quality of food, than similar animals confined to courts or tied in the stall. Wild animals, and those allowed to roam about, rarely become fat. It has been remarked by Liebeg, that cows driven long distances to pasture, unless they get an extra supply of food, yield milk poor in casein—the materials which would otherwise have formed that constituent of the milk being used in repairing the waste of the muscles and other parts employed in locomotion."

Professor Playfair, in a lecture delivered before the Royal Agricultural Society on the application of Physiology to the rearing and feeding of cattle, says,—"It is known that the vital forces decrease when the body is exposed to a certain degree of cold; and when this is sufficiently intense, that they are either suspended or are altogether annihilated. But the chemical force, oxygen, is condensed or increased in its power by such agencies, and it therefore now reigns triumphant. Vitality, (the cause of increase and of sustenance) being removed, chemical affinity, (the cause of waste) acts upon those tissues which have been freed from the dominion of vitality, and effects their destruction. Hence it is, that cattle do not fatten so well in cold weather as in hot. The chemical powers being now in the ascendant, prevent the increase of mass. We know, also, that the intervention of cold weather in summer either wholly arrests, or greatly retards, the fattening of our cattle. But as the decrease of vitality has been occasioned by a diminution of the temperature of the body, it is obvious that by an elevation of the temperature, vitality would be enabled to resume its proper functions. It has been shown that the food of various countries is more or less combustible, according to the temperature of the climate; and proof was adduced that the amount of the food consumed varied also according to the temperature. The animal body is a furnace, which must be kept up to a certain heat in all climates. This furnace must, therefore, be supplied with more or less fuel, according to the temperature of the external air. If, then, in winter we wish to retain the vital functions of our cattle in a proper degree of activity, we must keep up the heat of their bodies This we may do in two ways. We may either add more fuel (food) to the furnace, or we may protect their bodies from the cold. Warmth is an equivalent for food, which may thus be economised. But I wish to give you facts, and not assertions; and as a proof of the view I have now given you, I will cite the following experiment which was made by the Earl of Ducie, at Whitfield farm.

"One hundred sheep were folded by tens in pens, each of which was 22 feet in length by 10 feet in breadth, and possessed a covered shed attached to it of 12 feet in length by 10 in breadth. They were kept in there from the 10th of October to the 10th of March. Each sheep consumed on an average 20 lbs. of swedes daily. Another hundred were folded in pens of a similar size, but without sheds attached. They were kept during the same time, and their daily consumption of swedes amounted to 25 lbs. each. Here the circumstances were precisely similar with respect to exercise, the only difference being that the first hundred sheep had sheds into which they might retire, and thus be partially protected from the cold.

"This partial protection was equivalent to a certain amount of food, and consequently we find that the sheep enjoying this protection consumed one-fifth less food than those sheep which were left entirely exposed to the cold. In the last case the consumption of the additional food arose wholly from the necessity of adding more fuel (food) to the furnace of the body, in order to keep up its normal temperature. This was proved from the circumstance, that those sheep which enjoyed the protection had increased 3 lbs. each, more than those left unprotected, although the latter had consumed one-fifth more food.

"I wish particularly to impress upon you that warmth is an *equivalent* for food, and that therefore food may be economized by protecting cattle from the cold. The honey stored up by bees is for the purpose of serving as fuel to keep up the heat of their bodies during the winter. Now it has been found that when two hives of bees are placed in one hive during winter, that they actually consume less honey than each hive would have done separately. You will easily perceive the explanation of this circumstance from the facts which I have already stated. Their close contiguity prevents a rapid escape of the heat of their bodies, and consequently less fuel (honey) is required to

keep up the temperature. This case forms a very distinct proof that warmth is an *equivalent* for food.

"But I need only refer you to the results of your own experience, for every breeder of cattle must be aware, in the wintering of young stock, that they thrive better, with less consumption of food, when kept well shelterd from cold and wet."

Of the advantage in cutting hay for stock we have in this country but little evidence. The general opinion of farmers has been in favor of cutting hay, where any considerable portion was of inferior quality, especially if it was intended to feed meal with it, that the whole might be mixed together, and less would be wasted. So some experiments have been had in feeding cut hay and straw together, but the trials have not been carried out so fully as to show the advantage (if any) in cutting food for stock *in the quantity eaten*, and if any, in what it consisted. Whether it would pay to cut *good* hay, charging for the labor of doing it, is a question of which there is much difference of opinion. Some have believed that by the cutting of the hay, the digestion was aided; the animal being able to fill itself in less time, would have more leisure to chew the cud, thereby more completely extracting the nutritive qualities from the hay and derive more benefit from it. Others have contended that the animal eating the same quantity of hay would be prejudiced in having it cut—that in the eating of the long hay the saliva which assists in digestion would be more intimately mixed with the food, and more nourishment would be extracted from it. This is denied by the advocates of cutting. They claim that the gastric juice is mixed with the food when chewing the cud, and the animal having more time for that operation, would realise most benefit from its food. That there might be some slight benefit in cutting good hay, as there was less liability of its being wasted in getting a portion of it under their feet, was admitted; but it was said that this would be very inconsiderable, if the cattle were judiciously fed in small quantities and often; and it was contended that there could be no other advantage in cutting hay, than in preventing waste in some degree.

The several statements of Messrs. Demond, Dodge, Lincoln and Hawes are appended to this report, as a part thereof, from which the following facts will appear, from the statements made by them.

BY MR. DEMOND.

Cow No. 1, 7 years old, dried off about 10th December, calved 4th March, 1851, expected to come in about March 9, 1852. Trial commenced January 1, 1852—weight at commencement 870 lbs., at close of trial 931 lbs., mean weight 904 1-2 lbs., gain in 8 weeks 61 lbs., on cut hay 38 lbs., on uncut hay 23 lbs.; eat in 8 weeks 1174 lbs. hay—611 lbs. cut hay and 563 lbs. uncut hay.

Cow No. 2, 7 years old, dried off about 10th December last, calved 28th Feb'y, 1851, expected to come in about 9th March, 1852. Trial began Jan'y 1, 1852; weight at commencement 850 lbs., at end of trial 909 lbs., mean weight 879 1-2 lbs.; gain in 8 weeks 59 lbs.; on cut hay 26 lbs., on uncut hay 33 lbs.; eat in 8 weeks 1146 lbs.—560 lbs. cut and 586 uncut hay.

In addition to the hay, each cow eat 1-2 peck turnips per day, being 7 bushels to each cow, which is equivalent to 58 lbs. hay in value, making Cow No. 1 equal to 1232 lbs., provided the turnips were the common flat turnips, and Cow No. 2, 1204 lbs., which would make their daily food, as in hay, equal to 2 9-20 per cent. of their live weight, or an addition of 1 lb. in weight for every 20 3-10 lbs. hay, or its equivalent eaten.

BY MR. DODGE.

Near Steer, 3 years old this spring. Trial commenced Jan'y 3, 1852—weight at commencement 1075 lbs., at close of trial 1125 lbs., mean weight 1100 lbs.; gain in 8 weeks 50 lbs., on uncut hay 55 lbs., loss on cut hay 5 lbs.; eat in 8 weeks 916 lbs. hay—447 lbs. cut hay and 469 lbs. uncut hay.

Off Steer, of the same age; trial began at the same time, weight at commencement 1080 lbs., at close of trial 1160 lbs., mean weight 1120 lbs.; gain in 8 weeks 80 lbs.—on cut hay, 75 lbs., on uncut hay 5 lbs.; eat in 8 weeks 949 lbs. hay—469 lbs. cut and 480 lbs. uncut hay.

During the 8 weeks each steer had 2 qts. meal per day, which is equivalent to 293 lbs. hay, making for near steer equal to 1209 lbs. hay, and for off steer equal to 1242 lbs. hay—their daily consumption of food was in hay equal to 2 per cent. of their live weight, or 1 lb. in addition of weight to every 18 85-100 lbs. of food equivalent to hay eaten.

BY MR. LINCOLN.

Cow Beauty, 4 years old 13th May, 1852, calved 14th June, 1851, in milk, expected to have another calf June 30, 1852. Trial commenced 9th Jan'y, 1852; weight at commencement 905 lbs., at close of trial 1030 lbs., mean weight 967 1-2 lbs.; gain in 8 weeks 125 lbs.—on cut hay 100 lbs., on uncut hay 25 lbs.; eat in 8 weeks 1354 3-8 lbs.—685 7-8 lbs. cut and 668 1-2 lbs. uncut hay.

Cow Cherry, 4 years old this spring, calved on the 20th June, 1851, in milk, expected to have another calf 14th May, 1852; weight at commencement of trial Jan. 9, 1852, 815 lbs., at close of trial 850 lbs.; mean weight 832 1-2 lbs.; eat in 8 weeks 926 3-4 lbs.—464 1-8 lbs. cut hay and 462 5-8 lbs. uncut hay; gain in 8 weeks 35 lbs.—30 lbs. on cut hay and 5 lbs. on uncut hay.

In addition to the hay each cow eat 648 lbs. carrots, equal to 171 lbs. hay, which would make for Beauty equal to 1525 3-8 lbs. hay; for Cherry 1097 3-4 lbs. hay; in the meantime Beauty gave 413 3-8 lbs. milk—229 lbs. 4 1-2 oz. on cut hay, and 184 lbs. 1-2 oz. on uncut hay; Cherry gave 442 lbs. 15 oz. milk—209 lbs. 13 1-2 oz. on cut hay, 233 lbs. and 11-2 oz. on uncut hay; the daily food of Beauty was equivalent to 2 8-10 per cent. of her live weight; Cherry to 2 4-10; the gain of the two cows was 1 lb. of flesh for every 16 31-100 lbs. of food equivalent to hay eaten.

BY MR. HAWES.

Near Ox, 6 years old this spring, trial commenced 15th December, 1851; weight at commencement of trial 1520 lbs., at close of 8 weeks 1646 lbs., at close of 11 weeks 1628 lbs.; mean weight for 8 weeks 1583 lbs., 11 weeks 1574 lbs.; gain in 8 weeks 126 lbs.—120 on cut and 6 lbs. on uncut hay; gain in 11 weeks 108 lbs.—122 lbs. on cut hay, and loss on uncut hay 14 lbs.; having eaten in 8 weeks 2106 lbs. hay,—1078 lbs. cut and 1028 lbs. uncut hay; in 11 weeks 2925 lbs. hay,—1351 lbs. cut and 1574 lbs. uncut hay.

Off Ox, of same age, and time of trial same;

weight at commencement of trial 1500 lbs., at the close of 8 weeks 1604 lbs., at end of 11 weeks 1617 lbs.; mean weight for 8 weeks 1552 lbs., for 11 weeks 1558 1-2 lbs.; gain in 8 weeks 104 lbs.—on cut 17 lbs., on uncut hay 87 lbs.; gain in 11 weeks 117 lbs.—on cut hay 32 lbs., on uncut hay 85 lbs.; having eaten in 8 weeks 2106 lbs.—1028 lbs. cut and 1078 lbs. uncut hay; in 11 weeks 2925 lbs.—1574 lbs. cut and 1351 lbs. uncut hay.

The daily food of these cattle has been in hay about 2 4-10 per cent. of their live weight, or 1 lb. in addition of weight to every 18 26-100 lbs. of hay eaten.

The eight animals with which the before mentioned trials were made, eat in 8 weeks 5343 lbs. cut hay, 261 lbs. equivalent—5604 lbs., and gained in weight 401 lbs., or 13 97-100 lbs. hay to 1 lb. in weight gained; 5335 1-3 lbs. uncut hay, 261 lbs. equivalent,—5596 1-3 lbs., and gained in weight 239 lbs., or 23 41-100 lbs. hay to 1 lb. in weight gained. Greater gain on cut hay than on uncut hay by 68 per cent., and only 7 7-8 lbs. more cut hay consumed.

Mr. Lincoln's two cows eat 1150 lbs. cut hay, and gave 439 1-8 lbs. milk; eat 1131 1-3 lbs. uncut hay, and gave 417 1-8 lbs. milk. Greater yield of milk on cut than uncut hay 22 lbs., or 5 9-20 per cent., and only 18 7-8 lbs. cut hay in addition consumed.

These experiments seem fully to have established the fact that a much greater benefit is derived from cutting *good* hay, as food for cattle, than an equivalent for the expense of cutting; if obliged to hire labor for that purpose. These experiments were made under unfavorable circumstances. It is understood that the cattle were unused to eat *cut* hay, and although some of the cattle eat the cut hay readily, by the greater part it was refused until hunger induced to the consumption of it. Another objection—the term of each separate trial was too short; if the whole trial was to have continued but 8 weeks, it would have been better to have divided into 2 periods of 4 weeks each, than into four periods of 2 weeks each. There was a loss at each time of changing the food, by a part of the cattle not eating it so freely. It is now become manifest that the cutter can be profitably employed in chaffing hay, whether the whole be good, or a portion of inferior quality, straw, cornstalks and buts. Of the latter, cornstalks and buts, they are believed to be intrinsically of more value, than they have usually been estimated; when properly cured, they afford very nutritious food, of which cattle are fond, and if passed through a cutter, very little will be rejected. If the stalks and buts be not of a good quality, it will still be expedient to cut them, the cattle will eat a larger proportion, and what is refused by them will be more readily decomposed. Those who have been compelled with much hard tugging and pulling, to shovel over manure in which uncut cornstalks and buts have been mixed, will readily admit that the use of the cutting machine would have saved them much hard work, so much so as well to pay for the labor of cutting the stalks and buts.

[TO BE CONTINUED.]

☞ A man's owning a large farm is no excuse for imperfect tillage. What he cannot improve, he need not undertake to cultivate.

MULCHING.

The only definition given to this word by Webster is that of "*half rotten straw*"—and even this he takes from Bailey's old dictionary. At the present day it has a wider significance, and we believe that farmers and gardeners attach to it the same meaning in all parts of the country. The application of any substance about trees or plants to prevent a too rapid evaporation of moisture from the soil, and protect the tender roots from our fierce summer suns, is called *mulching*. In *Worcester's* dictionary we do not find the word. Its meaning, however, is now well established without the aid of any learned lexicographer.

Mulching, in our climate, is a most important operation. It may be done with meadow hay, straw, saw-dust, tan, chips that have been heaped and quick lime sprinkled among them, grass cut from the lawns or borders, leaves, or even bits of board, will pretty well answer the purpose. Where there are so many things to select from, persons in all situations will be likely to find something that will answer their purpose.

Those having machines for cutting hay and straw will find that by cutting these materials, they will get something admirably adapted for placing among strawberry plants. For trees and large plants, larger and coarser materials answer quite as well.

Young trees, tomatoes, strawberries, egg plants, currant and gooseberry bushes, cabbages, and nearly all the garden plants, may profitably be mulched. A more even temperature and state of moisture is preserved, weeds are kept under, and the plant is enabled to keep steadily growing. The surface soil is kept open and porous, and the whole process renders all things favorable to a free and luxuriant growth.

If the use of the word seem proper to you, and you become as well convinced of the importance of the operation as we are, you will straightway go and *mulch*.

For the New England Farmer.

THE BEST LOCATION FOR PEACH TREES.

Although the season for transplanting fruit trees has passed, the present condition of the *peach* in this vicinity so fully confirms the views of observing and practical horticulturists as to the best location for them, that it may be well to put them on record for the guidance of future operations. I have three acres in peach trees, about one-half of which are situated on low, plain land, and the other half on a high hill in the immediate vicinity. My trees on the low land have been injuriously affected and many of them entirely destroyed by the severity of the past winter, while those on the hill, occupying a bleak and exposed position, never looked more finely, and are now in full blossom. The *popular* impression is, that plain lands, with a somewhat sandy soil, are the best adapted to peach trees, and that they cannot live at all on

the bleak and ragged eminences, which form so large a portion of every New England farmer's domain. But this is one of the numerous cases where the popular belief, in horticultural matters, is at variance with the well established results of close and scientific observation. The peach loves an elevated locality, and one nearly as rough and rocky as the vine luxuriates upon on the banks of the Rhine. It requires a soil of considerable strength, and if it has a clayey subsoil, so much the better. My own observation and experience also go to overthrow the vulgar belief, that *highly manured* grounds are the most favorable to the peach. A part of my peach orchard occupies ground, which has for half a century been used as a garden, and which has been liberally manured. The consequence is, that there is an excessive growth of wood, and a consequently diminished product of fruit. Such a liberal application of manure is a sort of forcing, hotbed process, which gives the tree a luxuriant growth, but diminishes its capacity for fruit bearing. The peach tree requires a *cultivated* soil, and indeed it is preposterous to think, as many do, that it will flourish in sward land, even if the soil be ever so good. The soil about peach trees needs to be thoroughly stirred by the plow and the hoe, at least as often as every other year, or they will do little or nothing. Plant your peach trees then on your hills, and among the rocks where there is a good depth of soil, and let the soil be frequently stirred, and enjoy only a slight quantity of manure, and you will find that they will successfully resist the severity of our winters, load your table with most luscious fruit, and enable you to send to market an article which is always in demand, and which will amply repay your toils for its production.

May, 1852. WALTHAM.

SOURCE OF THE NUTRITIOUS PROPERTY OF VEGETABLES.

The nourishing property of corn, wheat and other grains, is owing to the gluten contained in them. And this gluten consists, in great part, of nitrogen. It is of course an important object with the farmer, to increase the proportion of gluten, and that is done by supplying additional nitrogen in the aliment of the plant. Carbonic acid and water are the chief sources of *growth*. Nitrogen is the principal element constituting the nutritive quality. The atmosphere contains a large quantity of nitrogen. It is not supposed to be taken up by vegetables, however, from the atmosphere, in its simple form, but, by combination with hydrogen, in the form of ammonia. By the digestion of the ammonia, the nitrogen is afterward separated in the plant and used to constitute the peculiar product, gluten, to which its nutrition is owing.

Ammonia is produced by the decay of most animal substances. In this way it is that the application of manures is so beneficial to plants;—by the supply of ammonia furnished, which being digested in the plant, results in a separation of nitrogen, which enters in the tissues of plants and produces their nutritive quality.

Ammonia is readily absorbed by water, and the rain and dew becomes impregnated with it, and it is thus administered to vegetables, in small quantities. This may be sufficient for their existence and ordinary growth. But a greater supply of ammonia is necessary to some plants on account of their peculiar economy. This is the case with all plants containing much gluten. And this substance may be greatly increased by a liberal supply of manures from which ammonia is more abundantly provided. These plants can therefore only be cultivated advantageously by a free application of manure, or otherwise an equivalent provision of ammonia in another form. Corn ordinarily, when raised in vegetable mould, contains nine and a half per cent. of gluten; but raised on land manured with blood or urine, has been found to contain thirty-five hundredths of gluten.

Gypsum has the quality of absorbing ammonia from the atmosphere, and yield it again to water which may soak through it. This is the mode in which gypsum has a beneficial action on vegetation, while the gypsum itself held in solution in water is considered to be injurious.

For the New England Farmer.

CISTERNS.

MR. EDITOR:—In a late number of the *Farmer*, Mr. B. H. Howard asks for information about cisterns. Such as I have I will give him, and the readers of your valuable paper.

The following table will give the contents of different sizes.

3½ feet diameter will hold for every 10 inches in depth,	59 gallons.
4 feet diameter,	78 "
4½ " "	99 "
5 " "	122 "
5½ " "	148 "
6 " "	176 "

You will find by this table that a cistern 6 feet deep and 6 in diameter will hold 1260 gallons, and each foot you add to the depth will hold 210 gallons. Therefore, one 10 feet deep and 6 in diameter will contain 2100 gallons.

I have one in my house cellar, entirely below the bottom of the cellar, 6½ feet deep and 5½ in diameter, holding about 1000 gallons. It was dug 6 feet 8 inches deep and 7 feet in diameter. The bottom being made smooth, was laid over with brick. The mason then began the side with brick laid in cement, leaving a space all round between the brick and earth about 5 inches. After raising the work about 18 inches, he carefully filled the space between the brick and side of the hole with earth, well and carefully pressed down. If you wet the earth or clay as you fill it in, it will be more compact.

When you get within about two feet of the top, commence gradually to draw in the work towards the centre, leaving, when finished, a space open about two feet across. The next thing is to plaster the inside with cement; also, the top on the outside, commencing where you began to draw in. About two course of brick are laid round the mouth of the cistern, forming a neck which adds to the strength of the top. Now cover the whole

with earth except the neck. The water is conducted to my cistern through a small brick drain laid in cement. I also have a drain near the top to let off the surplus water. If a cistern is made out of doors, it must be below the reach of frost. Lead pipe would probably be cheaper than brick, to conduct water to and from the cistern.

I have no doubt but that a cistern made this way of hard brick would last a century. Mine, holding 1000 gallons, cost $18,00. The larger the size, the less the cost in proportion to the capacity. If the earth is firm and hard, you may lay the brick close against it, thus saving the trouble of filling in and digging so large.

Amesbury, May 10. DANIEL BLASDELL.

P. S. I have known them made by cementing directly on the earth, using no brick, and covering the top with timbers or plank. One made with brick will cost more, but I think it best and cheapest, taking into consideration safety and durability.

REMARKS.—The information contained in this communication is valuable. Thousands of people who are scrubbing in, and scolding about, hard water, would be glad of a cistern, if they knew how large an one they require, and something about its cost and how to make it. They need not be expensive, as the labor of digging and carting away the earth may usually be performed without paying out cash. The water may be conducted from the roofs of the buildings and passed through one or two filtering casks filled with alternate layers of sand, charcoal and pebbles, and thus become the purest and best water for family use.

CASTOR OIL FOR LIGHT.

Some weeks since a correspondent inquired through the *Farmer* whether the castor bean could be raised in New England so as to afford a profitable light from the use of its oil. Our friends of the *Valley Farmer*, published at St. Louis, very kindly replied to the queries propounded, and we now give below their illumination of the subject:

"We will just inform our worthy brother that Providence has placed it out of the power of the farmers of New England to grow the castor bean. It is the slowest to mature of all the leguminous plants, and the easiest killed by frost, consequently it will not do north of latitude 39 or 40. Our 'Egypt' (Southern Illinois,) is the home of the castor bean, but there is corn there too, (and that's the reason why its called Egypt,) and corn made into pork, and thence rendered into lard oil, is a more economical light than castor oil, and not half so gummy. No, no, brother Yankee, you are pretty bright down there, but you can't *shine* in the castor bean line."

MASS. HORTICULTURAL SOCIETY.—There was a fine display of the early flowers, on Saturday last, at these rooms, outvied, however, by the array of beauty which had flocked into the hall to examine them. Popular as the society is, it is somewhat strange that out of this vast and intelligent population, larger numbers do not visit these rooms. Flowers are the angels of the trees, everybody loves them and feels their influence. There were also at the rooms three specimens of apples presented by J. B. MOORE, of Concord,—the Baldwin, Hunt Russet, and Winter Sweet, all as fair and beautiful as when plucked from the tree. Some fine-looking Black Hamburg and other grapes were also on the tables.

For the New England Farmer.

MOUNT AIRY INSTITUTE.

MESSRS. EDITORS:—In the month of October last I inquired through your journal, if there were any *Agricultural schools* in this country, and if there were, by whom governed and where situated; to which you kindly replied that if there were, they were not known to you. You also replied, that there had been one at Mount Airy, Pa., and requested the editor of the *Germantown Telegraph* to reply; he, however, overlooked your article (as I have learned since I arrived here,) and hence it was not answered, as it would have been had he seen it, for he is acquainted both with the Institute and Prof. Wilkinson, its principal.

By mere accident I learned the address of Prof. W., wrote him, and received the circular of the Institute.

I found in it just what I had long been looking for; accordingly I set out on the 1st inst., to go and see for myself. I have now been here nearly a fortnight, and have participated in numerous branches of the farm work for the season, have commenced the course of study here given, and am ready to admit, that the fault will be my own if I do not here acquire the knowledge, both practical and scientific, that will insure my success as a farmer, which I am determined to be.

The Institute, as its name implies, is situated on the summit of Mount Airy, Germantown, Pa., 7 miles distant from the Exchange, in the city of Philadelphia. Its location is proverbial for its healthiness, and is in a most delightful section of country.

Connected with the institution there are about seventy acres of tillable land, with extensive buildings, fruit and ornamental nurseries, green-house plants, &c. &c., together with the most approved agricultural implements now in use.

Agriculture, chemistry, zoology, physiology, entomology, natural philosophy, mathematics, &c., are thoroughly taught.

"Particular attention is given to the following subjects, viz.: The rotation of crops best adapted to the different soils and climates; breeding, feeding and training animals for labor, and milking; the management of the dairy and swine; the comparative value for food of the different grains, roots, grasses, &c.; selecting and fattening animals for slaughter; slaughtering and curing meats; preserving, composting, and applying manures; fertilizing with green crops, &c. &c."

"Two evenings of each week are devoted to the discussion of all matters pertaining to the farm, for which 'Farmer's Club' meetings are held, notes made on the discussions, and recorded in the journal which each student is required to keep for the preservation of a replete account of the experiments and operations of the farm."

Among the many new and interesting matter

in use here, are a very cheap and correct rain-guage, by which we find that 3 46-100 inches of rain have fallen during the last ten days—India rubber springs under the farm wagon—iron troughs for the hogs—a draining machine for pressing surface water furrows in newly seeded land—frame harness for oxen—a bull made to work in the shafts of the cart like a horse, also a railway horse power for cutting fodder, &c. &c.

When I have had time to become competent to judge of the merits, I will give a more minute description of each.

On the morning of the 7th inst., the ground was covered with snow, when we sowed the land designed for corn, and that in Lucerne, used for soiling, with Peruvian guano compost, 350 lbs. of the pure guano per acre, sown on the snow; the object of which was that we might see when we sowed it scantily, and that we could, by seeing the substance sown after it fell to the ground, more readily discern our defects in sowing. This I thought a capital idea. The compost was 1 bushel guano, 2 do. fine charcoal and 1-8 do. gypsum. The coal is damp, and when mixed with the guano, makes it free from dust, and much more pleasant to sow.

Hoping that you will pardon me for troubling you with so much and yet so little, I am, sir,

Very respectfully yours,

G. Tillinghast Hammond.

Mount Airy Agricultural Institute.
Germantown, Pa., April 12th, 1852.

Remarks.—We shall be glad to hear from our friend again.

For the New England Farmer.

DEEP PLANTING OF TREES.

BY MARSHALL P. WILDER.

Mr. Editor:—I cheerfully respond to the request of your correspondent, H. F. H., in relation to deep planting. I concur fully in his maxim, "*better too shallow, than too deep*," and also agree with him that more young trees are killed from too deep planting than from any other cause.

With the quince, the willow, and all trees, however, which root readily from cuttings or layers, the dangerous results of deep planting are obviated from the fact that these emit roots, however deeply planted, nearly up to the surface of the soil, where their food is assimilated to their wants by light, heat and atmospheric influences.

Pear trees, therefore, which are grafted on the quince, and are planted "*deep enough to bury the quince stock entirely below the surface of the ground*," will not be considered as *deeply planted*, when it is remembered that, under good cultivation, the quince will furnish itself with new roots up to its junction with the pear.

In the discussion to which your correspondent alludes, I could not of course enter into all the details of cultivation, without transcending the limits allowed to any one speaker. I however took it for granted, that a common sense view of the subject would lead the practical man to the conclusion, that the pear should be grafted as near the quince root as possible; and we would by no means recommend the selection of trees which are worked "six or eight inches" above the quince root. When it has been our misfortune to receive from Europe dwarf trees grafted thus high, we have uniformly planted the whole quince stock under ground.—But to counteract the deleterious effects of too deep planting, we have transplanted the trees, after an upper course of roots had been formed, at the same time removing the long shank with the lower and now inactive roots.

The principal advantages of the system we have adopted are, that the quince stock, which is naturally hard and rigid, becomes moist and emollient when covered entirely in the soil, thus allowing it to swell up evenly and progress symmetrically with the pear stock. In this way it is also protected from the depredations of the borer, and when the variety is well adapted, the pear stock frequently sends forth roots, thus securing the double advantage of early bearing and increased health and vigor in after years.

Yours, &c., M. P. W.

Dorchester, May 24, 1852.

THE SMALL POX.

Friend Robinson! allow us to congratulate you upon your escape from the clutches of this "ugly customer." Shakspeare said truly, "there's good in every thing"—if you had not been smitten, you had not given us the valuable recipe below, nor should we have had the benefit of "Capt. *Johnson's*" experience, or the philosophy of "getting round the corners." Now that "Richard's himself again," may he have prosperous gales, a good appetite and easy digestion.

Get from the apothecary, a little vial of stuff called "liquid cuticle," and as soon as the pustules are fully formed, apply a little of the liquid with a little brush or feather, to each one. As fast as they get ripe, remove the scab and wipe away the matter clean and apply the liquid again. If any of them fill a second time, you must remove the covering and repeat the process. It will smart like fun for a moment, but my word for it, when you recover, you shall not find a mark upon that pretty face of yours to prove you ever had the disease.

I am told the article is made of gun cotton, dissolved in chloroform. It forms an artificial skin over a wound, just as good as the real one. It is a valuable remedy, and I expect the ladies' department of the *Plow* will become immensely popular for making it public. I think the manufacturers of the article ought to send the editor a sufficient supply to give every lady subscriber a bottle, for this gratuitous puff.

Be Vaccinated.—If you have been, be so again, for it will protect you for a long time, but must be renewed. It protected me for forty-eight years, and as ladies never reach that age, they will be safe if vaccinated.—*Plow.*

Caterpillars.—These creeping gentry were made for some good purpose, undoubtedly; but outrage all our notions of propriety by feeding upon and denuding our fruit trees. This is the season for them to appear, and we recommend to every person who objects to their proceedings to be after them early in the morning with brush and pole, fingers and feet, or in any other way which shall effectually put a stop to their depredations.

HEALTH—GARDENING—TOOLS.

How much, suppose you, kind reader, is expended annually by the people of these States, in running to watering-places by persons in the cities, seeking health and amusement, and by persons in the country making their annual visits to the city to catch the fashions and enjoy a few days' excitement amid strange scenes and modes of life! The sum would unquestionably be enormous, while the utility of such a resort, taking morals into the account on one hand, and the loss or waste of time on the other, is somewhat doubtful.

It is certainly a partial loss, when time is devoted to a particular object in the pursuit of health and amusement, if that time might be given to some useful employment in which health and spirits would be promoted in an equal or greater degree, and at the same time some profit gained.

Men seek these places of resort as their only refuge from the dust and toil of the city; but they come "like angel's visits, few and far between," and do not, after all, answer the purpose desired. They need some *daily* call, to turn them from their pressing cares, some balm for the agitation of politics or commerce, or mechanic life; some cheap, attractive, and yet useful and profitable amusement.

It seems to us that nothing will satisfy this want like a *Garden*. We have often spoken in these columns of its beauty, its home-attractions and moral influence. Its profit will soon be manifest to him who cultivates it. Then the modes of communication are so frequent and rapid, that it is convenient and cheap to live in the country, and nearly every man who desires it may obtain a rood of land, where his leisure hours can be occupied in the midst of his family, and where he could cultivate the graces in his children, while cultivating his plants. This occupation would come daily, make no demands upon the purse for travelling expenses, hotel bills, porters and other extras, but on the contrary bring health, calm and contentment, and spread the table with bountiful supplies of wholesome nutritive vegetables.

Looking at the convenient arrangement and beautiful collection of GARDEN IMPLEMENTS exhibited in a collection gathered in a chest, suggested these reflections:—To enjoy garden or farm operations, one must have good tools to work with. In this collection we find the pruning saw, chisel and hook, with screw-pointed handle; the hoe, rake and scuffle; the tree-scraper, pruning-scissors and knife, vine-scissors, budding-knife, flower-gatherer, hammer, twig-cutter, grass or hedge shears, weeding fork, transplanting and weeding trowel, a garden reel and floral hoe-rake!

Shades of the "Old Gardeners," if you could see these, you would sigh for your old haunts again. Who is there that ever plucked a rose or dug a potato, that would not be attracted to the delightful employments of the garden by such a display! But we will only stop to say that this chest may be found at the warehouse of Messrs. Ruggles, Nourse, Mason & Co., Quincy Hall, Boston. We will add this, however, CULTIVATE A GARDEN—tool chest or not.

For the New England Farmer.

THE MOTHER APPLE.

BY CHARLES SIKDHOF.

This apple, a representation of which was given in the *New England Farmer* a few weeks ago, is a native of Bolton, about two miles from here. I never have seen it, but being so highly spoken of by such as know its value, it attracted my attention. The original tree is still growing; I was informed it was to be found on Mr. Theodore Gardner's farm in Bolton. On April 1st I set out, in the afternoon, with one of my pupils, for Bolton. I called on Mr. Gardner, who was very kind and obliging. He had sold the farm on which the tree in question is still growing, but he accompanied me there, and pointed the tree out, from which he cut me a few scions, being aware of the great interest I manifested in it. The apple was formerly known by the name of *Gardner's apple*. It being the only apple Mr. Gardner's mother liked, the children picked and preserved yearly the whole crop of the tree for her. This caused its present name, *Mother apple*, i. e., *mother's* apple, as the children of Mrs. Gardner used to call it. The tree stands in the yard between the house and woodshed. The house is the last in the village of Bolton, on the road to Stow, right hand side.

The Mother apple is said to be an abundant bearer. It is by many much preferred to the Hubbardston Nonsuch. It keeps till February, but is in eating from October.

Lancaster, Mass., April 16, 1852.

WHERE DOES WOOD COME FROM, OR WHAT ARE TREES MADE OF?

If we were to take up a handful of soil and examine it under the microscope, we should probably find it to contain a number of fragments of wood, small broken pieces of branches, or leaves, or other parts of the tree. If we could examine it chemically, we should find yet more strikingly that it was nearly the same as wood in its composition. Perhaps, then, it may be said, the young plant obtains its wood from the earth in which it grows. The following experiment will show whether this conjecture is likely to be correct or not. Two hundred pounds of common earth were dried in an oven, and afterwards put into a large earthern vessel; the earth was then moistened with rain water, and a willow tree weighing five pounds, was planted therein. During the space of five years, the earth was carefully watered with rain water. The willow grew and flourished, and to prevent the earth being mixed with fresh earth, being blown upon it by winds, it was covered with a metal plate full of very minute holes, which would exclude everything but air from getting access to the earth below it. After growing in the earth for five years, the tree was removed, and on being weighed, was found to have gained one hundred and sixty-four pounds. And this estimate did not include

the weight of the leaves, or dead branches, which in five years fell from the tree.

Now came the application of the test. Was all this obtained from the earth? It had not sensibly diminished; but, in order to make the experiment conclusive, it was again dried in an oven and put in the balance. Astonishing was the result—the earth weighed only *two ounces* less than it did when the willow was first planted in it! yet the tree had gained *one hundred and sixty-four pounds!* Manifestly, then, the wood thus gained in the space of time was *not* obtained from the earth; we are therefore compelled to repeat our question, "where does the wood come from?" We are left with only two alternatives; the water with which it was refreshed, or the air in which it lived. It can be clearly shown that it was not due to the water; we are consequently unable to resist the perplexing and wonderful conclusion—it was derived from the *air*.

Can it be? Were those great ocean spaces of wood, which are as old as man's introduction into Eden, and wave in their vast and solitary luxuriance over the fertile hills and plains of South America, were all these obtained from the thin air? Were the particles which unite to form our battle ships, Old England's walls of wood, ever borne the world about, not only on wings of air, but actually as air themselves? Was the firm table on which I write, the chair on which I rest, the solid floor on which I dwell, once in a form which I could not as much as lay my finger on, or grasp in my hand? Wonderful truth! all this is air.—*Exchange.*

For the New England Farmer.

A PEACEFUL WORK.

Friend Brown:—As you and my old friend French are now associated with a much loved relative of mine, in the noble work of improving the agriculture of New England, and elevating and purifying the moral and intellectual condition of the industrial portion of the community in general, and of the farmers in particular, I have been thinking I should like occasionally to join your company, and contribute my mite towards the accomplishment of the end proposed.

The political press aims at controlling the masses, and shaping them to its ends,—and its conductors, what satisfaction can they derive from a review of the course over which they have passed—of the means to which they have resorted—or the ends which they have reached, even when they have been successful? But you—you are telling simple truths, in the most direct and earnest way, in the kindest spirit, and with the best intentions. You are aiming to promote domestic peace and comfort, social enjoyment, industry, economy and every virtue. You awaken no jealousies, you kindle no hatreds, you plant no roots of bitterness, and when you review your labors you do not see the peace of society disturbed, bitter animosities rankling in the minds of men, and discontent and envy pervading the community, as the result, directly or indirectly, of your work. But you behold broad fields growing broader, green fields growing greener, "two blades of grass growing where but one grew before," the fruit of the earth increasing in variety, in size and richness, domestic conveniences and comforts rapidly increasing, implements of labor everywhere multiplied and improved; you see on every hand the spirit of invention, of progress, at work; brute force guided by science and skill, and results achieved, which a few years ago would have been deemed incredible; and you feel that you are identified with it all, that you are laboring to promote it all, that if it is not all your work, yet that you, co-working with others, have brought it all to pass.

You can lay your head upon your pillow at night with the consciousness that you have slandered no man, misrepresented no rival, perverted no truth, and put forth no effort or ingenuity to make "the worse appear the better reason;" but at peace with all the world, and with a kindly feeling towards even the beasts of the field, and the fowls of the air, you can commit yourself and all that is dear to you to the protecting care of the Common Father, and sleep in quiet until the birds, carolling forth the praises of their Maker from the fulness of their glad hearts, awake you from your slumbers.

If you are not among those who are turning the world upside down, yet the genial dew of your influence goes forth to fertilize the soil—and to quicken into life in the minds of thousands, intellectual and moral germs, which, developed by the culture that perhaps originated in words spoken by you, shall yield rich harvests, not only for themselves, but for the world. But though you are cheered by the consciousness that you are doing good, and by the faith that happy results always follow good thoughts, good words and good acts, yet you need all the patience of that charity which casts its bread upon the waters, relying upon the promise that he shall find it after many days. Indeed, we cannot expect to see any great and marked results follow in the immediate wake of any reformatory measure. He must be contented with a slow and gradual growth even of that which is good, so that the principles on which it rests may be understood, and incorporate themselves with the habits and the feelings of men. Thus the slow growth of the oak enables its roots to strike deep, and take a firm and enduring hold of the soil. This seems to be the order of Providence; and thus any sudden changes that do great violence to the established feelings and usages of men, however well intended, are of doubtful utility. Reformers would do well to remember this, if they would not have their work to do over again.

My dear sir, when I took up my pen, it was with the intention, after a short preamble, to say a few words on another subject; but I have run on almost unconsciously, until I perceive that it would be quite unconscionable to say more at this time; and I will close with an intimation, that for the sake of renewing old acquaintance and having a chat with old friends, I may send you now and then a short article, if it will be acceptable.

Yours, &c., J. R.

Gloucester, May 24, 1852.

Remarks.—This communication from an old friend is received in thankfulness—may many others follow it. We are aware that "all are not Israel who are of Israel," and suppose it is so with political parties. They are not all patriots who talk loudly of the virtues of patriotism upon

the stump! Yet, we think well of the large mass of political parties, whose "sober second thought," as Fisher Ames, (not Van Buren) our own honored son, said, in the Massachusetts convention upon the adoption of the Constitution of the United States;—the sober second thought of these masses will bring matters right; at least, such is our faith in the people.

But we agree with our friend, that the pursuits of rural life are far less exciting, and present far less temptations to fruitless ambition and corroding care, than political pursuits. There is *no* condition in life, in our opinion, so highly favorable to the full development of high character, the perfect man, as that of the agricultural community. In that, the moral powers occupy a higher scale than in most others, while the intellectual, perhaps, are less prominent. It becomes us, then, to raise these, and then we present not only the most perfect man, but the most perfect community, and nation.

Our friend's views of the position and influence of farmers are liberal and just, and their expression will afford encouragement to them as it does to us.

For the New England Farmer.

SIMPLE RULES,

FOR LAYING OUT GIVEN SURFACES.

These can be of little use to the surveyor, but may be of utility to refer to, especially to those who are not versed in the surveyor's art. In landscape gardening and rural embellishments a few such rules are often indispensable. In measuring land surfaces, the chain of two or four rods is used. A proper *chain* is 4 rods, or 22 yards, or 66 feet, or 100 links (of 7.92 inches) in length; and a square chain contains 16 square rods, or one-tenth of an acre. A wooden rod 16 1-2 feet in length, or a tape or rope of the exact length 16 1-2 feet may likewise be used. The square acre contains 160 square rods, or 10 square chains, (of four linear rods each.)

To lay out an acre in the form of a square, measure one way, (say north,) 12 rods and 16 2-10 links, or 12 rods and 10 7-10 feet; then measure at right angles to this, (say east,) the same distance. To lay out the same in form of an oblong, measure one way 20 rods and the other 8, or so that one side multiplied by the other shall equal 160.

To lay out, 1st, an acre, 2d, one-fourth acre, 3d, one-eighth acre, in the form of a circle:—

1. Fix a centre, and with a rope (radius) 7 rods and 3 3-8 links in length, trace the circle (of one acre) on the ground.

2. For 1-4 acre, use a measure 3 rods and 14 links in length.

3. For 1-8 acre, use a measure 2 rods and 13 links in length.

To lay out, 1st, an acre, 2d, one-eighth acre, in the form of an equilateral triangle:—

1. Make each side of the triangle 19 rods and 5 1-2 links in length for an acre.

2. Make each side of the triangle 6 rods and 20 links in length for 1-8 acre.

A plot of ground may be laid out having the form of an ellipse or oval, in the following manner, viz.: Set three stakes, not in a straight line, but say at the three corners of a triangle. Around these stretch a rope or cord. Then take away one of the stakes, which stake move along against the rope, keeping it tight, and it will trace out an ellipse.

If proper, I will send some simple rules for surveying land and for multiplying chains, links and rods, &c., with remarks on the use of the compass.

SALISBURY.

REMARKS.—Right and proper. Such short and plain rules are exceedingly convenient to most of us many times in the year.

A NEW HORSE RAKE.

A writer in the *Germantown Telegraph* says:—

"To the already extended list of labor-saving implements used on the farm, there has been another lately added, which is really a remarkable and valuable invention—being calculated to rake either hay or oats, on rough or level ground.

* * * * *

"In my opinion no invention calculated for the lightening of farm labor has been made for the past half century which can be regarded as more decidedly valuable. There is no need of stopping at all in placing the rows; it does its work *perfectly;* is cheap; easily mended when out of order; saves the labor of one hand, and will rake oats or barley as well as hay! Indeed, the latter grain is always so short, that the hand-rake *never* takes it clean, while this instrument leaves scarcely a straw behind. Any farmer who mows twenty-five acres of grass, and half or two-thirds the number of acres of oats and barley, would save the price of one in a season."

Our readers will recollect that we recently gave a cut of the rake described above. We have used it three seasons, and fully concur in what the writer states above, and will add, that the person raking rides, and finds the labor a light one.

A WONDER.

According to some Italian journals, a new organized being has been discovered in the interior of Africa, which seems to form an intermediate link between vegetable and animal life. This singular production has the shape of a spotted serpent. It drags itself along on the ground, and, instead of a head has a flower shaped like a bell, which contains a viscous liquid. Flies and other insects attracted by the smell of the juice, enter into the flower, where they are caught by the adhesive matter. The flower then closes and remains shut until the prisoners are bruised and transformed into chyle. The indigestible portions, such as the head and wings, are thrown out by two aspired openings. The vegetable serpent has a skin resembling leaves, a white and soft flesh, and, instead of a bony skeleton, a cartilagenous frame filled with yellow marrow. The native, consider it delicious food, at least so says the paper from which we copy the above, but we consider the whole story a fabrication.

For the New England Farmer.

FARMERS' DAUGHTERS.

"It's all owing to her *larning!*" exclaimed Aunt Judy, as she commenced rubbing her glasses with her new calico apron. "If they had n't sent her away to such a fine school she'd never a had such stuck up notions in her head! I never yet saw a mite of good come of it! Nobody need tell me, it is in the bringing up, for a nicer woman than Susan Grey's mother never was made. She's up airly and late, and one thing is sartain, she don't feel herself above the meanest creeter that walks. I hold to ministers and school-masters being larned and sich like folks, but it don't seem as if there was a mite of need of farmers' girls having sich larning."

"But what is the trouble with the daughter, Miss Beman?" inquired the new school teacher, as Aunt Judy replaced her glasses and resumed her knitting.

"Law sake! I don't know hardly how to tell you, only they have gin her a sight of schooling here, and away from home too, and they have jest about spoiled her; but Mrs. Green, here, can tell you enough sight better than I can."

"As to that," said Mrs. Green, "Aunt Judy and I are such good friends, that we will agree to differ in our opinion of these matters."

"It seems to me that time will rectify Susan's errors, for I do not deny that she has some foolish notions, but not, as I think, owing to her education, but only for the want of a little more."

"Bless me," exclaimed Aunt Judy, "how in the world could she have any more?"

"I will tell you what I think of these things, Aunt Judy, and perhaps we shall one day see even in Susan Grey's case, whether these opinions are correct or false.

"Farmers' daughters, from their earliest childhood, are, as a matter of course, accustomed to country notions, and country fashions. Comfort, happiness, and usefulness, rather than show, are what they are familiar with. Farmers' children do not see labor performed by servants only, but they see father and mother engaged in the active duties of life. Now it is not at all strange if a young miss who looks not beneath the surface at first, is quite fascinated with the glitter and display of a city, or that she should begin to think her quiet home in the country *very homely*, or that she should rather conclude that it was better to have servants do all the work. But ought the fear that the farmers' daughter will despise the home of her youth, and regard labor with aversion, to deter her parents from giving her all the advantages of education which their means will allow? Why, it seems to me it would be quite as ridiculous to exclude the pure air of Heaven from our dwellings for fear of breathing the pestilence, or to refuse to build a fire in mid-winter for fear our children would be burned! Let a farmer's daughter acquire as much information as possible, and let her be as accomplished as she pleases, but it seems to me she is, or ought to be, the last one to despise *common things*. Not that her being a farmer's daughter should prevent her having her full share of New England pride, but one ought never to despise any business or affairs which may claim a tolerable share of one's time and attention in after life. Although there may be no actual merit in being well versed in these common things, yet there is great folly in being willingly ignorant in regard to them. One of these common things of which you suppose Susan ignorant, Aunt Judy, is *cooking*."

"Law yes; if I had gals, they shouldn't be edicated to be afeard to burn their fingers with a hot pancake!"

"The truth is," resumed Mrs. Green, "few young ladies while at school have any idea how close an oversight the mistress of any well-regulated household has over her kitchen affairs. Although she may not be required to do her cooking, &c., entirely with her own hands, yet she is obliged to have the care of, and see to the whole.

"There are many ladies of superior education, who, commencing housekeeping with small families, choose to dispense with help, and do their own housework. Depend upon it, many a young housekeeper would gladly exchange her knowledge of French and Italian for the ability to place before her husband and guests a dinner which should be satisfactory to herself. Not that the exchange would be justifiable, but for the time being, the need of the one is felt to be almost as great as that of the other.

"A lady who was reared and educated at the South, married a New England clergyman, who, not unlike many of his brothers in the same profession, was not overburdened with this world's goods. The lady not from necessity alone, however, took the charge of her domestic affairs. Visiting her one day, I could not but observe the ease, and perfect order, with which all her arrangements were carried out. As I remarked this to her, she replied that the satisfaction which the discharge of these duties afforded her was sufficient to repay her for all the anxiety and care which she endured while attempting to learn. 'Were I mother of a score of daughters,' said she, 'they should all learn to cook while under the home roof; I was a novice in this branch of housekeeping, and finding, after some vain attempts, that I could not learn without a teacher, my husband brought the daughter of a farmer out of the city to our house, to give me lessons.

"'Often as twilight gathered around us, and she would solicit me to play some favorite piece of music, did I think that I would gladly have exchanged my acquirements in this delightful art with my beautiful instrument which I brought from my home, for her knowledge of *cooking*. But as I was a teachable pupil, I soon acquired this knowledge which you see is so useful to me; of my tears and discouragements, at my first attempts and failures, I will say nothing.' This is no uncommon case, but it is the experience of hundreds.

"But *farmers' daughters*, above all, should not be ignorant of this branch of education. They can acquire this more easily than others in different situations, for they are less liable to be interrupted by visitors, and usually have every facility and convenience at hand, and in truth there is no earthly reason, why they should be ignorant of any of these things. But I have almost forgotten Susan Grey, of whom you were speaking, Miss Beman!"

"Wall, now, do tell me Mrs. Green, after all you've said, which sounded well enough, if you don't think it would a bin better for Susan, if Mr. Grey had a took that very money which he paid out for her schooling, and bought two cows a purpose for Susan, and put the rest on't into the

Savings' Bank! Don't you think she, and all that has any thing to do with her in futer, would a been a sight better off in the long run?"

"By no means, Aunt Judy; why, the cost of an education is the last thing one ought to think of, but I will talk to you of this another time, for I fear Miss Holt is getting impatient to hear the end of our talk."

"Oh no, I was just thinking I would ask if the young lady was not blessed with common sense?"

"Oh yes, I never heerd any body say but what she is *bright* enough; when she was a very little girl I used to think she was proper bright, but I can tell you all I've got agin her is this, since she has got her education, I can't help minding that she appears proud in the meeting-house, and when she walks along in the road, and she ain't near so free to take hold and help her mother, and if any body knocks at the 'fore door,' off will come her calico apron, and I could tell more sich things if I was a mind to, but mind ye, it wan't so before they sent her away."

"Perhaps these things are all true, Aunt Judy, but depend upon it, that as Susan has a good heart, and good sense, these notions which you rightly call foolish, will be of short continuance, and you will yet say that Susan is a better woman, a better neighbor, and a more valuable member of society, than she could have been with little or no advantages of education."

At this moment little Emma Green reaching up, whispered, "Mother, the great girls said at school to-day, that Susan Grey was going to be married to John Wright." This was spoken loud enough for Aunt Judy to hear, who exclaimed, "Mercy on me! mercy on him, I mean! Wall, I know 'twill be the undoing of him! I can't think but he has lost his senses. Now I see 'twas well his dear mother was taken away from the evil to come." At the same time rolling up her work without knitting into the middle of her needle, a thing which under any ordinary emotion she would never have done.

"It would be difficult to determine," said Mrs. Green, after her sudden departure, "which is greater, Aunt Judy's surprise, or her desire to communicate the news, and witness the surprise of all she will see before reaching home. Naturally kind and benevolent in her feelings, she is interested in the affairs of others. *Aunt* to all in general, and no one in particular, she cares equally for the good of all, but her love of gossip has already grown to a passion; slow as she is in her motions, yet like the magnetic telegraph, if there is any *news* to be communicated, it is done quickly."

* * * * *

"I've been in to see John Wright's wife," said Aunt Judy, as she stopped before Mrs. Green's sitting-room window, two years after the above conversation. "You know I always make a pint of going to see every body—I should a gone as soon as they were married, if I had not had the rheumatism so bad."

"Did she catch off her calico apron?"

"Law no, I did not go in to the 'front door,' I like to go through the kitchen and look round a bit; but she had some pretty grand looking company come whilst I was there, from N———. Susan did n't seem a mite put out, but would make me stop to tea; her supper was proper nice, and I looked round considerable, while she was getting tea ready, and every thing was neat as wax. I did not think of setting down to the table with the rest of the company, but she would'nt take no, for an answer. I thought I would try her once, so I says right at the table, 'your butter is beautiful, Miss Wright, did you make it yourself!' You see I thought she would be kinder ashamed to own it before them smart folks.—'Oh yes, Miss Beman, I have no girl, and I do all my work,' she said. 'Most I'm afeard of Mrs. Green, is that she will work too hard."

"I see you have changed your mind, Aunt Judy."

"O, wall, I don't know but it is partly owing to her 'making out' so well marrying, but she is a beautiful woman, not a mite proud; but I must go, for I see my cow is waiting at the bars." D.

Brentwood, 1852.

Remarks.—Capital. We thank you, madam. Our new Kossuth is off and we present our best bow. We trust "Aunt Judy" will consider herself demolished, and that all her nephews, nieces, and "cronies o' that ilk," will surrender at discretion. But there are a great many "Aunt Judy's" still left. Ignorance and prejudice are fast anchored among us. In different districts they take their peculiar form and shut out the rays of truth which ought constantly to stream in upon the mind, about as effectually as the roof does the rays of the sun. There is no stopping-place for those who are willing to labor; line upon line and precept upon precept are as necessary now as though the words had never been uttered before. Pray let fly another arrow from your quiver, madam; it will pierce a head of prejudice somewhere, and the monster will have one the less to be broken.

For the gratification of our correspondent, we will say, that her "Farmer's Wife," published some weeks since, has visited various parts of the Union, and often comes back to us in delectable company, looking as youthful and happy as when first it left its mother's home.

For the New England Farmer.

VEGETABLE POISONS.

Mr. Editor:—I saw in your last number what was said to be good for vegetable poisons. But I think I have a remedy far before buckwheat flour and vitriol, or the wild Salandine, and the scratching thrown in, which is as follows:—Take the leaves of what is called Plantain leaf; pound them fine in a mortar, then put them in a cloth and press it hard until the juice is all out. Drink from half to two-thirds of a tumblerful of it at a time, which should be taken on an empty stomach in the morning; and the same on going to bed would hasten a cure more rapidly. It is not necessary to put anything on the outside, for the Plantain being taken inwardly, not only kills the poison, but it drives it out of the blood, and purifies the whole system. Applying remedies to the surface may kill the poison, but at the same time you may

drive it into the blood, which is worse than to have it on the surface.

The above recipe I give from personal experience, as I have been cured by it repeatedly from poison extending over my whole body. I have also known others to be cured by the same remedy. The Plantain grows plentifully about most houses and barns. C. B.

New Hampton, N. H., 1852.

For the New England Farmer.

POTATOES AND MEN.

Be it as they will have it, that man is but a mere potato. It is a matter of no little importance to know what men are made of. Yesterday it was said of a thoughtless multitude, who do not read the papers, "They are small potatoes." If so, they have one sign of popularity,—there are many of them.

A potato lives but a short season. So it is with man. Each has its spring-time; each has its time to be harvested; each, uncultivated and wild, lives without any important end.

The hidden life of the potato is that which defines its true value. The hidden life in man, a well-stored mind, is something more than potato-tops.

What is that man made of, who toils in the field yonder? What is he? He is made of the same that a potato is made of, the elements of the earth. He was taken out of the ground, and a good part of his walking body was last year growing in the potato field. As the woodman who felled the forest was preparing to build houses for men's bodies to live in, so the man of the hoe, as he digs open the potato-hills, prepares to build up the house in which the inner man holds his courtly abode.—What can the world do without potatoes? Almost as well might we now ask, what would the world be without inhabitants?

Potatoes cannot live without food. They must have something to eat, and the kind of food which suits their nature, just like human beings, or they cannot be healthy,—they cannot grow. It is not enough to know that human beings require food. The cook should know *what* food is suited to the health and life of man. If man is compelled to feed upon matter which is unsuited to his constitution and nature, the consequence is, he dies. There could be no poison, were it not that certain properties cannot live together. So poison kills; and yet, what is deadly poison to one animal body is nutritious food to another, or, at least, it is harmless.

It is no more necessary that the farmer's wife should know how to feed her children, and the farmer how to feed his cattle, than it is that he who puts a potato to work to raise other potatoes should know how to feed that growing potato.

A farmer feeds salt to his cattle; but will he therefore feed his hens with salt? He has perhaps learned how to feed a hill of corn; does he therefore know how to feed a hill of potatoes, or a hill of beans? "All flesh is not the same flesh," and all vegetables have not the same properties. It may be admitted that all men are potatoes, and that some fields have produced quite a large supply of "small potatoes," which scarcely have eyes enough so that they can see to read; and worse than that, some of their heads are those so like the heads of a potato, that there can be no question about it, they are "tops."

Every ton of grown potatoes necessarily takes from the soil several pounds of potash, and no small quantity of the properties of common salt. It takes up also the properties of Epsom salts, plaster of Paris and animal bones, in less quantities. It takes up the elements of water, and of decayed vegetable matter to some extent. From this we may see at a glance what must be given as food to the growing potato. The dry matter of the tops is nearly one-half lime, but there is a much smaller proportion of lime in the tubers.

Men breathe, and potatoes may be said to breathe also, for they take much substance from the air. They cannot grow with the tops cut off, much more than a man can live with his head cut off, because they must take a part of their growth from the air, as man by breathing lives. So much for potatoes. C.

Mason, N. H., March, 1852.

WOOL.

This great staple is one of much importance to many of our readers, who will read with interest the following remarks from the *Commercial Journal* of Pittsburg, written by a correspondent who thoroughly understands the wool trade:—

Very little, as yet, has been done in this important staple of our country. Cold weather, and an exceedingly late spring, have kept the growers from clipping their sheep, consequently very little will be done till June. This time last year, eastern manufacturers had their agents in the country, speculators and dealers were in the market, and a general anxiety to purchase. This year, matters present entirely a different aspect; no orders have been sent out, and very few, if any, agencies have been made. Our city dealers talk of the extremes of 20 to 33 cents for common to full blood, and 35 cents for strictly prime, which is a decline of fully 10 cents per pound, from the opening prices of last year.

It is generally conceded the clip will be heavier than usual. Very few sheep were killed the past winter for the pelts and tallow, and as a natural result, as we have been informed by those experienced in matters, an increase in the weight of the fleeces, from the severity of the winter. One thing is very certain, woollen goods are unusually low; and in the face of an easy money market in the east, still declining. The manufacturer says he must get wool lower than last year or stop. They cannot expect any protection from our government, and their only hopes are to get their wool at such prices that they can compete with foreign cheap capital and cheap labor. Our western farmers and wool growers now can begin to see who have to hold the bag. We trust and hope better things. We like to see our products bringing good remunerating prices. When the farmers flourish, we all flourish; when they are doing well, every department of trade feels the beneficial effects.

☞ We are glad to hear that HENRY F. FRENCH, Esq., of Exeter, has consented to give the address before the members of the Hillsborough Agricultural Society, at their next annual Fair, next autumn.—*Granite Farmer.*

FRENCH MERINO SHEEP.

We give above a group of beautiful *French Merino Sheep*, the property of GEORGE CAMPBELL, Esq., of West Westminster, Vt. The description of them below, is a portion of a report of a committee made to the Farmer's Club in the town mentioned, and is undoubtedly accurate, as the report was adopted by the Club.

To the Agricultural Club of Westminster West, Vt.

Your committee appointed "to examine the flock of sheep imported from Europe last spring by Geo. Campbell, Esq., and report their opinion thereof," ask leave to make the following report.

That we have attended to the duty assigned us, and are happy to be able to make in general a favorable representation of the flock in question. They are composed of both French and Silesian Merino. The French Merinos were selected with great care by Mr. Campbell in person from the Government, and other of the best flocks in France. They are of an extraordinary large size, generally good form, with a thick, even fleece, good length of staple and fair quality of wool. They seem to be hardy and to possess a good constitution, are very docile and quiet in their disposition, and this, with their great size, seems to point them out as a valuable variety for their carcasses as well as their fleeces.

The average live weight of 61 breeding ewes, (a part of which are at the farm of Wm. Chamberlain, Esq., of Red Hook, Duchess County, N. Y., who is a partner of Mr. C.,) after shearing last spring, was 103 lbs., of their fleeces 12 lbs. 8 oz. of unwashed wool. His buck, "Matchless," of this variety, is believed to be the largest save perhaps one in the State, and is really a noble looking animal, being short legged, thick set, well formed throughout, and worthy the attention of all our wool growers. His live weight after shearing 224 lbs., weight of fleece 20 lbs. 12 oz. He had evidently lost a large quantity of wool and some flesh on the voyage.

The breeding ewes are in very good condition, though not so excessively fat as some we have seen in another part of the State. They are now nursing, and seem to retain a good healthy appearance, both mother and young, much more so in our opinion than they would do if they were unnaturally covered up with fat as the flocks referred to.

TRICKS OF ANIMALS.

In breaking or managing a horse, however intractable or stubborn his temper may be, preserve your own. Almost every fault the brute has, rises from ignorance. Be patient with him; teach and coax him, and success in time is certain.—There are tricks, however, which are the result of confirmed habit or viciousness, and these sometimes require a different treatment. A horse accustomed to starting and running away, may be effectually cured, by putting him to the top of his speed on such occasions, and running till pretty thoroughly exhausted.

A horse that had a trick of pulling his bridle and breaking it, was at last reduced to better habits by tying him tightly to a stake driven on the bank of a steep stream, with his tail pointing to the water; he commenced pulling at the halter, which suddenly parted; over the bank he tumbled, and, after a somerset or two, and floundering awhile in the water, he was satisfied to remain at his post in future, and break no more bridles.

A ram has been cured of butting at everything and everybody, by placing an unresisting effigy in a similar position; the sudden assault on a wintry day then resulted in tumbling his ramship into

a cold bath, which his improved manner took good care to avoid in future.

A sheep-killing dog has been made too much ashamed ever again to look a sheep in the face, by tying his hind leg to a stout ram on the brow of a hill, while the flock were quietly feeding at the bottom. The ram being free, and in haste to rejoin his friends, tumbled and thumped Master Tray so sadly over the stones and gullies, that he was quite satisfied to confine himself to cooked mutton thereafter.

Man's reason was given him to control "the beasts of the field and birds of the air," by other means than force. If he will bring this into play, he will have no difficulty in meeting and overcoming every emergency of perverse instinct or bad habit in the dumb things by his superior cunning. —*American Agriculturist.*

WATER—WATERING GROUNDS.

Pure water is composed of fifteen parts hydrogen and eighty-five parts oxygen. But this is not true, precisely, for other substances are held in solution by water, besides the two above named. It may, however, be the exact proportion of these two constituents, which compose very nearly the whole of water; though the proportion may be somewhat varied in the differents kinds of water. This is so important an element in the vegetable process and economy, that a few lines in relation to it cannot be amiss in our columns. Highly beneficial in some forms and certain quantities to vegetation, water may yet be positively injurious in others. Water in minute quantity is favorable to combustion, as we often notice the blacksmith moisten his coal, though in excess it quenches it. So it is with air. The blowing of the breath, or of a bellows, kindles a fire, while the same blast will extinguish the flame of a lamp. Thus water and manure also may be given in such excess to plants as to be positively injurious.

Rain water is considered the best for watering grounds by reason of the principles with which it becomes saturated in the atmosphere. It is soft, easily dissolves soap, and is best for cooking. This might easily be collected by the farmer into cisterns, and used as occasion requires; though by long keeping in cisterns it loses some of its valuable qualities. Where it is practicable, a better way would be to collect it by gullies in some low spot in the garden, forming a small reservoir or pond to be used as needed. Rain water is supposed to be better for watering, when it has run over the ground than when it falls from the clouds.

The waters of rivers and running brooks flowing over the surface of the ground are very good, and supposed to be better the farther they have flowed and the greater their volume. Small rivulets may contain oxide of iron not sufficiently decomposed, or other matters injurious to vegetation, which is not the case in larger bodies of water, or likely to be.

Stagnant waters exposed to the sun and air become filled with animal and vegetable matter which though injurious to man, is highly salubrious to plants, and is therefore very good for the purpose of watering.

Spring water is apt to be too cold for some vegetables, and should stand exposed to the warm air in vessels before applied. As it is frequently conveyed a long distance under ground before coming to the surface, its character is of course varied by the kind of earth through which it has passed, and may be beneficial or injurious accordingly.

Well water is considered the least beneficial to vegetation, though perhaps it is more used than any other. Well water, that is soft, good for washing, will, if kept standing some time in vessels exposed to the air, be good for plants. Well water or other containing gypsum in solution is hurtful to them, and should not be used.

For the New England Farmer.

PRACTICAL FARMING—NO. 4.

CORN CULTURE.

Mr. Editor:—I suppose that almost every man who lives on a farm calculates that he "knows how to raise taters and corn, without looking into any of your garbled books and papers; for he learned of his *father*, and he knew how as well as any body;" but be that as it may, I believe in improvement, and in order to make all we can, it is just as necessary to report a failure as it is if we succeed ever so well; that others may not fall into the same error.

Last spring I planted one acre and a half to corn. An acre of it was to potatoes the year before, and the other half acre to corn. The half acre was manured with green manure the year previous, and last year I used well decomposed manure in the hill, applying no other in any way. I put a smallish shovelfull to a hill. On the acre I put about twenty loads of green manure; plowed it in about five inches deep, using none in the hill. No lime or ashes were used on either. 250 lbs. of gypsum was used. It was all in one piece. That on the half acre was considerably the best. The whole was extremely light, yielding only fifty baskets of ears. The reason of the failure, I think, was the absence of the phosphates, and might have been supplied by the use of lime, gypsum or ashes. If others have had similar results, please report. S. Tenney.

N. Raymond, Me., May, 1852.

A Missouri Farm.—There is a farm upon the prairie, near St. Louis, owned by Ligerson & Brothers, (who seem to understand that to make money by farming, money must be invested to begin with,) comprising one thousand acres in one field, fenced with posts and rails, a mile and a half square, and containing 150 acres of corn, 40 acres of strawberries for the St. Louis market, 30 acres of flowers, 50 acres of peach trees, and 200 acres of other fruit, among which are 2,500 pear trees, 200 acres of mowing, and 30 of pasturage. One row of pear trees is three-quarters of a mile long,

with a protecting row of arbor vitæ. All the orchard ground is cultivatad in strawberries, melons, or something else. There are 600 sheep and 160 cattle kept on the farm.

For the New England Farmer.

WHAT KILLS THE APPLE TREES?

BY HENRY F. FRENCH.

A few moral reflections—Death of apple trees—Valley of the Connecticut—U. S. fast coach—Keene—Claremont—Francestown—Chester, &c.—How the cold affects the trees.

My Dear Brown:—New Hampshire would be altogether too pleasant a State "to emigrate *from*" were it not for about seven months of cold weather, and some other trifling circumstances which remind us that perfect happiness on earth was not a part of the great plan of creation. How admirably would all our agricultural schemes work out to our satisfaction, were it not for the unlucky *accidents*, which are always happening, showing how

> "The best laid schemes of mice and men
> Gang aft agley."

If there would not always come a freshet, or a drought, or an early frost in autumn or a late frost in June, or some unlooked for calamity, surprising to the "oldest inhabitants," what crops of corn, and potatoes, and grass, would we not have! What vines and fig trees of our own would we not sit under!

But alas! as we set forth in bills in chancery, "the contrary thereof is the truth." Instead of everything "turning up favorable," as Mr. Micawber expected, and revolving like good steady planets in a regular comprehensible orbit, round some central principle, off they dash, like so many comets into all sorts of eccentricities, doubtless by some rule of "order not understood," putting all human calculation at defiance. As the good Cardinal Wolsey, following the sentiment of the wisest of men who pronounced all earthly objects and pursuits "vanity and vexation of spirit," well says—

> "This is the state of man—to-day he puts forth
> The tender leaves of hope, to-morrow blossoms,
> And bears his blushing honors thick upon him;
> The third day, comes *a frost, a killing frost*,
> And when he thinks, good easy man full surely
> His greatness is a ripening, nips his root,
> And then he falls."

And so I come naturally to my particular subject of remark. The effect of cold on fruit trees. I had on my place at Exeter, last autumn, about one hundred and sixty young apple trees, some set out in the fall of 1846 and some every year since. I think some twenty-five or thirty of them, principally of those set in 1848–'49 and–'50, have their tops destroyed by the cold of the last fall and winter, and I fear that many others are seriously injured. Early in April, I noticed in cutting off small branches near the trunk of the trees, a circle of yellowish wood immediately under the bark. I have watched them carefully since. The buds appeared to swell as usual.—Some of them opened partially and some not at all. The bark on the outside looks perfectly fresh and sound, with the exception of two or three trees, from which it has blistered and cracked a little and started off. The wood next the bark is yellow.

I have trees at all stages, from those leafless and black, to those in full vigor. Some have a few leaves at the ends of the limbs, and some a branch or two in leaf, and the rest bare. I think the best course will be to saw them off near the ground, and graft them with scions cut at the proper season. And in this experiment I feel no great confidence of success, because I find that several of my trees which had been set three years, and then were grafted last spring, are dead, and that they gave the earliest and most decided symptoms of injury, the bark and sap wood being yellow, at my first examination of them in April, although the scions grew well and even have thrown out small leaves this spring. In this village, I find quite a number of apple trees in the same condition with mine—most of them which have been from the nursery but two or three years. Since I left you at River Cottage, on the 22d inst., I have made what Queen Bess would call a *Progress* through a considerable portion of New Hampshire, and have, of course, carefully observed the condition of the fruit trees on my route. That you may have a realizing sense of my opportunities for observation, I will briefly sketch my line of travel before comparing results. From Concord, Mass., I took the railroad to Fitchburg, and then up the Cheshire and Sullivan railroads, through the most beautiful and magnificent scenery that can be seen in New England on any railroad line, up the lovely valley of the Connecticut, stopping a day at Keene, Charlestown and Claremont, to pay my respects to the Monadnock and Ascutney, and other distinguished characters, who give dignity and grace to that side of New Hampshire, to attend to a little *worldly* business and to note carefully the agricultural condition of the land.

From Claremont, my business called me to Francestown, and lest our readers who have only travelled in that favored section of New Hampshire which lies on the Connecticut, should set the Granite State down as a second Paradise, and feel disposed to repine at their lot for being compelled to live any where else, I must give you a glance at what one *goes through* on the overland route between Claremont and Hillsborough Bridge railroad depots.

I was told at Claremont, that the mail stage would leave at five A. M., for Hillsborough, and was ready for a start at the hour, supposing that the United States mail coach, like time and tide, would wait for no one.

After waiting patiently *one hour*, the United States mail coach *did* come, in the shape of a *one horse wagon*, containing the driver and two women for passengers. Upon my suggesting that he was late, the driver said there was time enough, and it was soon manifest that the whole expedition, if such a contradiction in terms is allowable, was planned upon the theory, that *time* was of no particular importance. And so we four in an open one-horse wagon slowly crept out of the beautiful village of Claremont. As we crawled like a very slow funeral procession up, up, up the hills in Unity, the grass seemed less green, the trees showed a thinner foliage, the rocks lay thicker and larger, and it seemed "like a dream when one awakens," to think of railroad trains, and the beautiful villages on the beautiful river I had left. To give additional interest to our position, just as we commenced the ascent of the longest, bleakest hill on the route, it began to rain, and as I had neither

overcoat nor umbrella, I was able fully to appreciate the advantages which vegetation was likely to derive from the irrigation. One of the good ladies, who carefully protected her best yellow bonnet from the rain with a large whitish parasol, by means of which she skilfully conducted the surplus water down the back of my neck, complimented me highly upon my cheerfulness under these trials. Upon my saying that fretting would not help the matter much, she solemnly remarked, "Well, I suppose it is all for the best, and we ought to be resigned to it, and trust in Providence, *when we can't help ourselves.*" And so we came to Lempster, and waited one hour for breakfast, and then proceeded *seven and a half* miles to Washington, when the driver announced that we were to stop there to dine!

It was precisely quarter past eleven when we arrived, and we had come less than twenty miles in all, and had but twelve more to go. But in spite of all remonstrance, the driver *would* stop and *did* stop, and got his dinner and started at twelve, very much refreshed. The country seemed gradually to improve, as we approached Hillsborough, where we emerged once more into a region where everything valuable except *time* seemed to be more abundant than on the United States mail route from Claremont to Hillsborough Bridge. I next visited the pleasant village of Francestown, and returned home by way of the N. H. Central Railroad, through Manchester, and the next day visited the good old town of Chester.

And now, having shown you my opportunities for observation, I will give you the results, and then my theory as to how apple trees have been *winter killed*, as it is called.

At Keene, in the garden of Col. B. F. Adams, I saw apple trees injured precisely as my own are at Exeter.

His garden is in the village, on plain, frosty land, and his trees had grown rapidly. In company with T. H. Leverett, Esq., I visited an orchard of some fifteen acres, about two miles out of the village, on the northerly side of a high hill, owned by Mr. Leverett and Hon. Joel Parker, now of Cambridge. About 5 years ago, they purchased the tract, which had never been plowed, and is so stony that it probably never *will* be, with a large number of natural trees upon it. They have grafted those trees, and filled up any unreasonably large vacancies, and their trees, many of them large and in full blossom, are likely to prove very valuable.

These orchards are on one of the very top corners of that end of the world, with no shelter between them and the north pole, and not one single tree, twig, bud or blossom, so far as I could perceive, had suffered by the winter. On this same hill I saw peach trees in full bloom, as I did also *on the hills* at Hillsborough, Francestown and Chester. At the latter place, which you and I, who have lived there for years, know to be one of the bleakest places in this part of the State, every thing in the shape of a tree, apple, pear, peach, cherry, everything *that is not sawed off square* at both ends, is full of blossoms. Not a single young apple tree that I could hear of has been injured.

Upon the low, sandy land *subject to early autumn frosts*, the injury is extensive, and it has been greatest to highly cultivated trees. My conclusion upon the whole matter is, that it is not the intense cold of the winter, but the cold weather of autumn which finds the trees on warm and sheltered land full of sap, that does the mischief. Whether the first severe frosts destroy the peach buds I am not confident, but am inclined to think that such is frequently the case. The wood of the apple tree is probably killed by the freezing of the sap and bursting of the sap-vessels in the fall or early part of winter.

I cannot conceive that the difference between the mere intensity of the cold of the past and of previous winters can have produced such results. In all parts of New Hampshire the thermometer almost every winter sinks to twelve or fifteen below zero, and I have seen plenty of apple and peach trees fresh and blooming this spring, where it was twenty degrees below during the past winter.

My friend, Mr. Hall, of Bradford, who is good authority in such matters, assures me that his tender shrubs, with no more than ordinary protection, have endured the winter unusually well.

It is obviously important that the true theory of this matter should be understood. Against overcultivation and against over-protection of trees by shelter in the growing season we may provide, and we may often have choice of hill or plain or valley for our orchards, but against the thermometer's going twenty degrees below zero anywhere at the north, we have no means of interposing any effectual preventive.

Hoping that the readers of the *Farmer* will furnish us the means of comparing notes upon these points, I remain, Yours, &c., H. F. F.

Exeter, N. H., May 31st, 1852.

HOEING.

This important farm operation is now in prime demand. The long-continued cold, succeeded by unusually hot days, together with genial dews and showers, has given vegetation great activity. The corn, potatoes, peas, beans, squashes, in short, all the plants look well—bearing a fine healthy color, and are stocky and strong. With such a start, their growth may be very rapid, and *the weeds will keep pace with them.* A neglect to hoe a field just at the time when it needs it, increases the labor of that operation wonderfully; indeed the error can scarcely be retrieved through the season. Weeds become like the power of a bad habit, almost impossible to be broken up; they not only draw largely upon the soil, but mix their roots with those of the plants, and upon being pulled, loosen and break their tender fibres.

But the benefits to be derived from hoeing are not confined alone to the extermination of the weeds. This is but a small part. Plants only come to maturity under a combination of favorable circumstances. They must have light, air and warmth, and the soil must be in such condition as to administer all these to the young and tender roots, in order to secure their perfection. There may be no weeds to exterminate, while the necessity for hoeing will still exist. Heavy showers, succeeded by fierce suns, form a crust on the surface which renders it impermeable in a great mea-

sure to light, air and heat. This needs to be broken up and pulverized so that it may admit these and the dews and succeeding rains. There are other reasons which it is not now necessary to enumerate. The careful cultivator will not wait for the appearance of weeds as the only evidence of the necessity of hoeing.

For the New England Farmer.

A WORD TO FARMERS ABOUT SUMMER SCHOOLS.

No one denies the utility of education. It is common to call school-houses "the glory of the land." To give the children a "good schooling" is the highest ambition of many parents. To accomplish this desirable result, no better system of education is necessary than that which prevails in our own commonwealth. Yet, strange as it may seem, there are many who keep their children out of school during the summer, that they may work on the farm! With some families this may be the result of stern necessity; being poor, they cannot afford to pay for all the work that must be performed, and therefore, as a matter of economy, the labor of their children is indispensable. It is one of the misfortunes of their poverty, for which there is no alternative but submission.

With reference to such we have not a single admonition to offer. Not one word would we write to awaken in their bosoms painful feelings. They are doing the best they can.

But there is another class with whom no such necessity exists. They are amply able to allow their children to go to school through the whole year, but they keep them home from choice—keep them for pecuniary gain. Sometimes this is done without much consideration on the part of the parents: sometimes it is done because it is the fashion; for in some places it is just as much the fashion to keep children from school in the summer, as it is to clothe them in garments of a certain pattern. But whenever this is done, it is a great injury to the child; because, during his absence, in addition to forgetting a large portion of what he learned, he has his habits of study broken up; and when he returns to school, it is much more difficult for him to apply himself to his lessons than though he had not been away. In addition to these disadvantages, when he returns to school, and sees that the class which he left is far in advance of him, feelings of despondency, dissatisfaction and shame are excited, which, on many minds, produce a peculiarly discouraging effect.

We ask now, is this procedure kind? is it judicious? is it *right?* Will you let the minds of your children run to weeds by detaining them at home to keep weeds out of your garden? Will you allow their intellect to become comparatively barren, that through their physical strength you may make your land a little more productive? Are fruits and vegetables more valuable than ideas? Is a strong arm better than a strong mind? Are you more anxious that your children should learn the language which oxen understand, and thus be able to guide them with words, than you are that they should become acquainted with the laws of their own language and by its skilful use, convince, persuade and lead reasonable men?

But you reply; "by keeping our children at home we teach them habits of industry, and is not that an important branch of education? Certainly. But when you send them to school do they acquire nothing but lessons of indolence? Is there no room for diligence there? Can industry be learned only at home? Any experienced teacher will tell you that children, in order to distinguish themselves as scholars, have to *work*. Indolent pupils are generally ignorant ones. It is here as elsewhere that "the hand of the diligent maketh rich." Many a boy would rather chop faggots, or dig the ground for an hour, than to spend the same length of time in study. It would be easier work, even though he perspired at every pore. The sweat of the brow comes easier than the sweat of the brain. It is a difficult task to work up the mind to a state of intellectual heat or of mental moisture. This is labor. Hence one of the advantages of a well disciplined school is that the pupils are *there* trained to industry. They are taught to work.

We say then to parents, send your children to school as uninterruptedly as possible. Keep them not at home during the summer term. Their school days will soon be over, and then they must enter with their limited degree of preparation upon the responsibilities of life. The best education they can obtain with the full use of all their privileges, they will find little enough for all the important duties which will devolve upon them.

J. B.

For the New England Farmer.

ERRATA.

In my last (page 220) you make me say that I planted two rows with large potatoes cut into two pieces, one piece to a hill, the other two to the small ones from which I had picked the seed for the other two rows. This was a mistake, whether in me or your printer. I planted two rows to whole potatoes, large enough for one to a hill, the other two to the small and large ones, from which I had picked the medium sized ones, (for the other two rows,) cutting the large ones and putting one piece to a hill. Of the small ones I put two, and as I before said, the medium sized whole potatoes produced one-eighth the most. Accept my thanks for your remarks.

Yours for improvement, S. TENNEY.

N. Raymond, Me., May, 1852.

MASS. BOARD OF AGRICULTURE.—The Executive Committee of this Board will have a session at the State House, on Wednesday, the 9th of August, to appoint delegates to the National Agricultural Convention to be holden at Washington, on the 24th day of the present month.

At this busy season it will be inconvenient for the county societies to assemble and make a formal choice of delegates, and we therefore recommend to them to send up to the Massachusetts Board the names of such persons as express a willingness to attend, and let them be regularly authorized by the Executive Committee, to whom was delegated all such powers.

☞ Mechanics should ever remember that punctuality is the life of trade.

HAY AND FODDER--CUTTING AND CURING.

It may be safely averred that there is not a single operation on a farm that cannot be, and that ought not to be, conducted upon scientific principles. Hence the utility, the necessity, of a scientific education of farmers. If the remark be true of farm operations generally, it is more especially so of the subject of hay-making. In this we require a knowledge of vegetable physiology, of chemistry, of *pharmacy*. Vegetable physiology will teach us the nature and functions of the various organs and parts and juices of the plants with which we have to do; chemistry will teach us the theory, and pharmacy the art, of curing and saving the article in the best manner. There is no doubt that a very large portion of the nutritive matter of hay, and all kinds of fodder, is lost by a want of knowledge of this kind. The writer of this has never seen a hay-field at *haying-time*, that he was not forcibly impressed with this truth. To illustrate this subject—suppose a pharmaceutist, the Shakers, for example, were to gather their medical herbs, and cure them, and house them in the same way that hay and fodder are usually gathered, cured, and saved—what, let us ask, would they be worth! Gathered at very improper seasons, cured in such a manner as to ferment and evaporate all their intrinsic virtues, and at last housed in a place, and in a condition, to make assurance of its destruction "doubly sure," it may well be conceived they would not be worth much. There are certain rules to be observed in this, as in all things, to attain the highest degree of perfection before it is cut, and that degree is found to be at the time of *flowering* or blooming, just before the seed begins to form. It being a *herbaceous* plant, the whole natural object of it is to make seed, and all its juices are, at the time of flowering, in their richest state. This is the time to cut it. If cut before this time, the juices are imperfect, and the fibrous matter immature; and if delayed beyond this time, more or less of the richness of these juices is expended in making the seed. If the seed is allowed to become *ripe*, the hay is comparatively worthless. We never saw a load of hay in the market for sale, that did not exhibit unequivocal signs of having had a very large portion of its rich qualities exhausted, either before it was cut, or in curing. When it is understood, that if allowed to ripen seed perfectly, the grass loses all its rich juices, and becomes mere dry straw—woody fibre, a little silicate of potash, and a very trifling quantity of vegetable extractive matter, the importance of cutting it at the right time will be apparent.

And here it is proper to mention another error of almost, if not quite, equal importance. It is that of mixing different kinds of grass together. There are scarcely any two grasses that flower at the same time, exactly, and if two be mixed, that flower at different times, one or the other will be greatly deteriorated by being cut too soon or too late. All grasses, should, therefore, be kept in distinct meadows.

The curing process is, however, of much the most importance. No matter at what times the grass be cut, if it be not properly cured, the hay will be worth less, in proportion to this imperfection. Two tons of hay shall be taken from the same field, the one cured properly, the other carelessly—and the one shall be worth twenty dollars, while the other will be dear at any price, except for mere straw. Let us descend to particulars, for the subject is sufficiently important to authorize it. Nearly the whole nutritious properties of the hay are in a fluid, or semi-fluid state, highly susceptible of fermentation; and if fermentation takes place, they will be immediately dissipated in vapor. The object to be attained is to cure the hay, by evaporating the *water* only, of these juices, leaving the saccharine and other principles in a solid state in the body of the grass. But if the juices of the grass be allowed to ferment, then all these principles are rapidly changed, and pass off with the water in vapor. The usual method of curing hay, especially in the middle States, permits the green cut hay to lay in masses till it gets more or less heated, especially the under portion of it. This heat is produced by fermentation. We usually see the hay in the swath till the next day, and then it is merely turned over, and even that very *carefully*. The underside will then be found to be very warm. Now, all this is wrong. The hay should be shaken up lightly, and loosely, so that none of it will lay in compact masses, and that the air may pass freely through it. It should be gathered into winrows as late as possible in the evening, and these should be well opened and turned, and loosened, early in the morning, so as to avoid spontaneous fermentation. If the weather be fair, the hay cut yesterday will be fit for cocking this afternoon, but it is not ready for housing or stacking. A great error is often committed in cocking hay, in allowing it to remain in these small stacks too long. When cocked, the hay is merely wilted, not cured, and if allowed to remain in cocks, will ferment there. They should be opened and spread about, and re-cocked several times before being permanently stacked or housed. Shaking hay about has a great effect in curing it, much more than is generally supposed. It exposes it to fresh air, which carries off the water, and the oftener it is shaken up, the sooner and better it will be cured. Many object to shaking up the hay while the dew is on it in the morning. This is an error. A good shaking at that time, will effectually dry it.

Many an old farmer will undoubtedly laugh at my simplicity, in thinking it necessary to give such plain, common-place notions, publicity. But if they will take a look at the hay that is daily brought to all our markets for sale, they will find abundant excuse for me. Nine-tenths of the hay thus exposed for sale, is a mere mass of dry straw; much of it made so by curing, and the rest by unseasonable cutting. Hay, in a perfect state, should be of a bright greenish color, and as odoriferous as green tea; but the mass of that brought to our markets, is of such a dull straw color, that it requires some close inspection to ascertain whether it be hay or mere *chess* straw, and you may run your nose into the middle of a load of it, (if it be long enough!) without detecting any odor at all—unless it be a musty one.

I must give the New York farmers the credit of producing the best hay we have seen in our city markets. I have frequently used that sent by them to the Baltimore market, pressed in bales, and found it to be worth, intrinsically, twenty-five to thirty per cent. more than that usually brought here from the surrounding country. And the reason of this difference in quality evidently grew out

of the more perfect manner of curing, and attention to the time of cutting. There are many individual exceptions here. There is as good hay made here, as there is in the north, and as good farmers, and as scientific farmers too, but they are exceptions to the rule, not the rule itself. My object, of course, is to do my part to make all our farmers what the exceptions are admitted to be.—*Albany Cultivator.*

WHERE DID THEY COME FROM?

On Thursday, the 3d June inst., we entered our garden at about half past 4 o'clock in the morning, where we witnessed a sight new and unheard of by us before. It was a column of the insects which usually appear in large numbers at this season of the year, or perhaps a little later, and generally called May-flies, or for want of a better name, "two-tailed bashaws," by the fanciful. They have two wings and six legs, the two front legs appearing to be used as much as feelers as for locomotion. The abdomen is about half an inch long, and at its termination has two, sometimes three, long hair like appendages equalling the whole length of the body. These insects are dark colored, some of them nearly black. The morning was calm.

They came from the northeast and were flying southwest, in one unbroken column of more than a quarter of a mile in width. They kept about ten feet from the surface, and the column was perhaps twenty feet deep. At what time in the night or how early in the morning they started, we know not; but from half-past 4 to 7 o'clock, the column passed on in the same direction, in countless millions, neither turning to the right or left, but urgently pursuing their course as if they had some important business which could not well be postponed. At a quarter-past 7 none were seen.

Their flight was not very rapid, and what is singular, most of them were coupled together, one flying with his back downward. On disturbing them they merely turned aside, to avoid the obstruction, and immediately came into line again, seeming intent to get *somewhere very soon.*

Contrary to our expectations, the swallow people seemed to take little notice of them. Occasionally they would dart through their midst, but we think did not feed upon them, as we heard no snapping of their bills, nor saw any indications of their attempting to avail themselves of the bountiful harvest.

Like the pigeon in its flight, they kept over the high land, and the higher we ascended the hill, the thicker they were. Where did they originate and where were they going? We know of no one but Professor HARRIS qualified to enlighten us. We should be glad that his lamp might shine upon this marvellous and unexpected visitation.

☞ The whole world has taken the place of Rome in granting indulgence to the rich.

For the New England Farmer.

A NEW APPLE.

DEAR SIR:—I left at your office a few apples of a new variety, a seedling, originating on land of mine in Sherburne, which promises well for late keeping. I have called it the *Mayflower*, as it is unfit for use until that month. I tested its value this spring for the first time. The tree is of small size, standing in a pasture, and has borne a medium sized apple every other year in abundance, but so hard and unpalatable that we never thought of using them for any purpose but cider. Year before last I saved a few of them with other winter apples, and opened them in February; I found them hard and sound, but still unpalatable. Last fall I put up about two-thirds of a barrel of them, mingled with second-quality Russets, filling the barrel. They were not examined until the first of this month; the Russets were considerably rotten, but not one of the Mayflowers, and half a dozen only were specked. Most of them had ripened finely, some were still hard, their flavor, as you will perceive, excellent for the table, rich, slightly acid, and aromatic. I believe they bid fair to rival in durability and excellence even the Roxbury Russet, which now stands decidedly in advance of all late spring apples. If you think this account and the sample afforded you warrant it, you are at liberty to publish it, with such remarks as you may deem proper.

Yours, R. C. STONE.

Sherburne, May 18, 1852.

REMARKS.—We have tasted the apple referred to, and think well of them as late keeping apples. Our friend, however, is somewhat sanguine in his views, as most people are who find a new fruit so accommodating as to spring up unbidden and come to perfection upon their own premises. We certainly think the Mayflower well worth careful attention, and have no doubt it may be considerably improved in size and flavor by giving the tree proper treatment. We have not tasted this apple cooked, but uncooked it falls short in size and flavor of some that keep well until mid-summer.

For the New England Farmer.

MAMMOTH RHUBARB.

MR. BROWN:—Dear Sir,—We send you six stalks of "Myatt's Victoria" rhubarb; it is not so large as we have seen, still it is very fair. We send one of the leaves, as you will see; it is quite large; if you do not raise this variety, perhaps you, and may be Mr. Raynolds, would like to test its quality. We think it as good in quality as any we have ever seen.

Yours respectfully,

JAMES HYDE & SON.

Newton Centre, June 7, 1852.

REMARKS.—We knew you were "tall on vegetables," but had no idea that you were imitating the California pines with your rhubarb. We shall despatch it to "our tie up" by the first freight train! and only regret that you will not be with us to help eat the "four dozen pies" which will probably come out of it!

For the New England Farmer.

AGRICULTURAL COLLEGES.

Perfectly agreeing, as I do, with your Newton Centre correspondent, "W. A.," as to the inexpediency of a State Agricultural College, and mourning the rejection of an article I sent to the editors of the *Farmer* some year ago, in which I attempted to express similar sentiments, will you allow me to thank you for the publication of his article, and to express my approbation of the principle of admitting articles into the columns of agricultural papers, although they may not agree with the opinions of the editors. Political papers may confine themselves exclusively to one side of the question; and so far as they can make their readers bigoted, so far let them call it success. Let the editors of such papers place their own opinions at the magnifying end of the glass, and those of their opponents at the other end,—and let all who like the fun of being thus duped and humbugged, support the system. But don't introduce it into our agricultural periodicals. Encourage correspondents. "Variety is the spice of life." Count it no heresy in one writer to differ from any other, provided he has a reason for the faith that is in him, although that reason may not be satisfactory to him, who, for the time being, chances to occupy the "tripod." Avoid all indications of the "one man power." And by so doing, I apprehend the *New England Farmer* is fast gaining favor and *golden* opinions in the community.

But I am getting away from my text. I did not, however, intend to preach a sermon this time. I purposed only to say "amen" to the remarks of my brother, "a humble individual" before alluded to. But, as my hand is in, I wish to say a word or two in relation to an argument I have seen, in different shapes, several times in the *Farmer*, for immediate action on the part of this State in favor of an agricultural college, viz.: Unless old Massachusetts leads quick, she must follow instead of lead the enterprise,—an unusual position for our glorious old commonwealth. Now, according to my recollection, this idea of college farming is by no means a new one—nor is it an untried experiment, in our own country. I have access to few agricultural books, to refresh my memory; but I think I have read of several schools in which agricultural science was to have been taught, and my impression is that all these attempts have utterly failed. And such failures of all such incipient attempts to make farmers *in school*, is to me a *practical* argument against the possible attainment of the expectations of the advocates of agricultural colleges.

On looking over two vols. of the *Albany Cultivator*, which I am sorry to say form a large part of my agricultural library, I find several notices of schools in which agriculture was to be taught. On page 119 of the *Albany Cultivator* for 1845, is a notice of "Aurora Agricultural Institute," "Charles C. Young," Principal. The institute was located near the village of Aurora, having good buildings and 212 acres of land. Mr. Young says, "it is the intention of the undersigned and his associates that this institution shall afford every facility for young men to make themselves thoroughly acquainted with the principles of agricultural science, and their judicious application to practical husbandry." . . . . . "It is also their intention to commence a course of experiments, in order to test the correctness of those principles in agriculture which may now be generally received, but are not quite well established." Dr. Alexander Thompson was to have particular charge of the scientific department. And Mr. David Thomas, a name familiar to every reader of the agricultural publication of New York, was to aid by council and advice. B. P. Johnson, Esq., President of New York State Agricultural Society, recommends the school, and says:—"From my acquaintance with Mr. Young, I am satisfied that he is fully competent to manage an institution of this kind, combining scientific with practical agriculture."

In the same publication for 1844, a year previous to the above, the rise and progress of a regular agricultural college is traced, in successive numbers, which also appear to have given rise to divers sanguine hopes. On p. 74 we are told that an agricultural school had been for some time in so flourishing a condition, near Nashville, Tenn., that "the managers have concluded to enlarge their plan, and accordingly have procured from the Legislature (Tennessee) a charter for an *Agricultural College*." Thus leaving the Old Bay State eight years behind, though she should start now,—a fact, I apprehend, that has escaped the recollection of some of those who have spoken and written this winter on the subject of agricultural education. On page 79 of the volume for the succeeding year, (1845) we find "that this institution commenced operations on the first of January, with about fifty students." Here, then, eight years ago we had an agricultural school and an agricultural college, chartered by a legislature, in the full tide of "successful experiment." Where are they now!

ECHO.

Winchester, May 10, 1852.

REMARKS.—It seems to us that the writer errs in one extreme, as some of our friends do in another. It is neither agriculture taught exclusively on the farm, nor taught exclusively in the schools, that is to make the intelligent and successful cultivator. The skilful navigator and mechanic combine theory and practice; and so must the farmer. The latter needs a thorough and exact education, as much as the man of any profession whatever, in order to pursue his calling intelligently, and with pleasure and profit. Where can the young man go, now, to acquire that exact information necessary to enable him to understand the complicated processes of nature about him! To understand the botany, physiology, chemistry, &c., &c., which ought to guide his labor, and make them co-workers with him in his daily avocation! We believe there is a great want of help of this kind from some source, and confess that we know not at present where it is to be found. But we would not separate the practical from the theoretical; they must go hand in hand onward. Let us "make an effort," to do something, and with prudent counsels, there is no need or danger of doing harm.

GREEN MOUNTAIN CULTURIST.—Such is the title of a neat monthly on good large type, devoted to

agriculture and its kindred branches, and published at Middlebury, Vt., by D. R. Bassett & Co.—The number before us is filled with good articles, and promises well.

For the New England Farmer.

LANCASTER TREE CLUB.

BY CHARLES SIEDHOF.

Lancaster, Mass., is undoubtedly one of the most beautiful villages, not only in Massachusetts, but America. It is not my object to describe it; I wish merely to say, that its roads, streets and intervales abound in trees of large size and elegant appearance. In Emerson's "*Shrubs and Trees of Massachusetts*," two especially beautiful trees of Lancaster are mentioned,—a gigantic elm on the bank of the Nashua, between Lancaster and the Old Common, and a white oak on the foot of George hill.

C. F. Symmes, Esq., of this place, an intimate friend of mine, observing that I was as much delighted with trees as he himself, suggested to me to avail myself of the opportunity which a series of lectures I was to deliver before the Lyceum afforded me, and to propose the forming of a tree club, in order to continue and complete the plantation of ornamental trees on the public roads and walks, commenced years ago by sensible men. I did not for a moment hesitate to do this, and had the pleasure of seeing the "*Lancaster Tree Club*" formed, whose object is the embellishment of the environs of Lancaster. Each member of the club pays one dollar annually, either in cash, or in labor, or in trees. It does great honor to the inhabitants of Lancaster, that they are so ready to support an association, with the greatest liberality, which has nothing to do with making money or the sensual luxuries of life for which thousands and thousands are spent daily. Indeed, there is more in life than money or tea parties. A heart open for nature's charms and beauties cannot beat in the breast of one who is bad.

Lancaster, April 16, 1852.

Remarks.—Mr. Siedhof, the writer of this communication, is the founder and teacher of the school for boys in the pleasant town of which he writes, and which we recently said something about. If we had a son which we desired to send to school, it would be to a person imbued with such sentiments, and such a love for the natural and beautiful, as we have noticed in Mr. Siedhof's writings. But, alas, we have none. Ours, the only son, was called from this beautiful and busy world long years since, away, home, where he was wanted by his Father to cultivate, and be cultivated, in a still more bright and lovely existence. We can therefore only prompt others to what we think we should do ourselves in their circumstances. Plant a society, and plant trees. Beautify the heritage that God has given us. Line the highways with trees that will produce fruit as well as shade, and welcome the traveller to both. Let us forget ourselves and make *humanity* appear in every act; then will our memory be sweet, and we shall have no occasion to run a crusade after happiness.

FEEDING STOCK.

There are few of the operations of the farm so little understood as that of feeding out the products of the fields to the animals that are sustained by them. Amid all the exertions of the fifteen or twenty agricultural societies in Massachusetts, encouraged, and partly supported by the bounty of the State, and many of them having among their number gentlemen of learning in physiology, chemistry, and great practical skill on the farm, few exact experiments have been made as to what particular times or in what particular form, fodder for the cattle should be fed out.

Many persons of liberal views and ample means have been discouraged from making these experiments, on account of the distrust and want of faith in the community, in regard to everything done of this kind, which is not performed by the farmer who labors daily with his hands at the plow, hoe or scythe. They possess every requisite qualification for such investigations, and would engage in them with zeal, but for the fear that they would fall still-born upon the world, or only excite the sneers and contempt of that large class so wedded to old habits and notions as never to see any good in anything that is new.

Under such discouragements, we are glad to find the *Worcester County Agricultural Society* appropriating a portion of its ample funds to a series of experiments in regard to the feeding of stock, as interesting as they are valuable to the farmer. These experiments have been conducted by the order and under the sanction of that society. Messrs. John W. Lincoln, John Brooks, Wm. A. Wheeler, Thomas W. Ward, and Charles Brigham, were placed upon the committee by the trustees, and it is their report upon the experiments made which we now propose to lay before the reader. It will be found of equal interest in all parts of the country and to every grade of farmers whether keeping one or one hundred head of cattle.

The whole report is worthy of being placed upon record for immediate use and future reference, and while we take this opportunity to express our obligations to the society for their wisdom and forecast in directing these movements,—to the committee for their sound and discriminating views upon the experiments made,—and to the experimenters for their pains-taking and careful labors, we shall extract and spread broadcast most of the report before us.

Our readers as well as ourselves, are indebted to the Hon. John W. Lincoln, Chairman of the Committee, for an early copy of the report, free extracts from which may be found in another part of the paper.

☞ Numerous inquiries having been made, in consequence of a notice, which we published some

weeks since, of a remarkable calf belonging to Mr. B. F. Dudley, of Milton, we would state for the benefit of all the curious, that the calf weighs 310 pounds on completing its tenth week, having gained nearly 3 pounds a day for four weeks; that it has been sold to a gentleman who will raise it for breeding purposes; and that any of our readers who want to see a handsome and well-selected stock of cattle, will do well to visit the farm of Mr. Dudley.

For the New England Farmer.

ON THE CULTIVATION OF NATIVE TREES AND SHRUBS.

BY S. P. FOWLER.

[CONTINUED FROM PAGE 132, VOL. III.]

The long-leaved Willow, or the Salix Speciosa, is represented as being a most beautiful tree, and a native of the northwestern part of America. It will undoubtedly prove hardy in the most northern States of the Union, as it was seen around the Great Bear Lake, and on the banks of the Mackenzie river, within the Arctic Circle, by Sir John Richardson, and noticed in his journal of a boat voyage to the Arctic Sea, in search of the discovery ships under command of Sir John Franklin, lately published. Richardson says the Banksian pine was not traced to the north of Great Bear Lake River; and that there the southern Salix Candida is replaced by the more luxuriant and much handsomer Salix Speciosa, which is the prince of the willow family.

It likewise inhabits the Arctic Sea coasts, from Coronation Gulf to Kotzebue Sound, and ranges southward on the Mackenzie to about the 60th or 61st parallel. It is perhaps the handsomest of the genus, having an agreeable growth, and very large leaves, which are of a silvery whiteness beneath, and when bruised has rather a pleasant odor. On the Mackenzie it grows to the height of 15 feet, in form of a bush, with very stout and long yearly shoots, which distinguish it from all the other willows of the same localities. On the coasts of the Arctic Sea, wherever the rivers afford a suitable point of alluvial soil, a thicket of this willow may be expected, as tall as a man. Mr. Seeman observed it in the tree form, on the northwest coast, where it is from 18 to 20 feet in height, and having a stem, five inches in diameter. Such is Sir John Richardson's account of this fine Polar tree.

It is likewise noticed in Mr. Nuttall's *North American Sylva*, vol. 1st, page 58, and accompanied with a figure; where he says, "no willow on the American continent presents so remarkable and splendid an appearance as the Salix Speciosa or Long-leaved Willow, the effect of which is produced no less by its magnitude, than the size and beauty of its foliage. Its aspect is that of a large peach tree, with the leaves and their stocks from five to eight inches long, by an inch to an inch and a half wide; beneath, when adults, they are glaucous, like those of the River Maple. The summit is tufted and spreading, and the tree attains the elevation of about 20 to 30 feet, with a trunk of 12 to 18 inches in diameter. When in full bloom, which is with the first expansion of the leaves in May, the numerous and large bright yellow catkins, loading the branches, emulate the finest Acacia of New Holland; they are also agreeably fragrant, and attract swarms of wild bees, and other insects in continual motion among their waving branches. We have seen this noble species nowhere in such perfection as along the banks of the deep Wahlamet and the wide Oregon, whose numerous islands are almost exclusively decked with this imposing willow.

"As we sailed along the smooth bosom of these extensive streams, for many miles we never lost sight of the Long-leaved Willow, which seemed to dispute the domain of the sweeping flood, fringing the banks of the streams and concealing the marshes entirely from view; at every instant, when touched by the breeze, displaying the contrasted surface of their leaves; above of a deep and lucid green, beneath the bluish-white of silver; the whole scene, reflected by the water and in constant motion, presented a silent picture of exquisite beauty."

We are not aware that this fine willow has been under cultivation in this country or in England, as we do not find it in *Loudon's Encyclopædia* of the trees and shrubs of Great Britain. The Salix Candida being found in a high northern latitude, would prove hardy in Massachusetts. It has been introduced into Great Britain, and is said by Loudon to be a very handsome species of willow, well deserving a place in shrubberies, both for its ornamental white leaves, and very early flowers. The Cornus Nuttallii, or large flowered Dogwood, is a most splendid tree, some of them rising to the height of 50 or 70 feet. It resembles somewhat the Cornus Florida, but the tree and its flowers are much larger. It will probably prove hardy in Massachusetts, like the other trees and shrubs of this genus. The Cornus Mascula, or the Cornelean Cherry, although a native of Austria, is perfectly hardy in Massachusetts, and we have noticed recently a plant in our grounds, that has perfectly withstood our severe winter, and its pretty flowers will soon appear. It bears a handsome crimson fruit, of the size and appearance of a cherry, which was formerly used for tarts.

The Cornus Nuttallii is figured in Mr. Nuttall's *North American Sylva*, and thus described: "On arriving, towards the close of September in 1834, at fort Vancouver, I hastened again on shore, to examine the productions of the forests of the far West, and nothing so much surprised me, as the magnificent appearance of some fine trees of this beautiful Cornus. Some of them growing in the rich lands near the fort, were not less than 50 or 70 feet in height, with large, oval, acute, lucid, green leaves, which, taken with the smooth trunk, and unusually large clusters of crimson berries, led me, at first glance, to believe that it was some new magnolia I beheld, until the flower buds, already advanced for the coming season, proved one plant to be a Cornus, allied, in fact, to the Florida, but with flowers or colored involucres, nearly 6 *inches* in diameter!

"These appeared in all their splendor in May of the following year, of a pure white, with a faint tinge of blush; the divisions, also, of this brilliant pseudo-flower, are usually 5 or 6 in number, of an obovate outline, with the points often acute.—The leaves are about 4 inches long, and 2 1-2 wide, with a considerable quantity of pubescence

beneath. The cluster of bright red berries is scarcely inferior to that of the cone of the Magnolia umbrella, and although somewhat bitter, they are, in autumn, the favorite food of the Band-Tailed Pigeon." There is no doubt, but that it is as hardy as the common Dogwood, and more deserving of cultivation. It has been raised from seeds sent over to England, but the plants are yet small. S. P. F.

Danvers, April 28, 1852.

[TO BE CONTINUED]

For the New England Farmer.

BARRE, MASS.

FRIEND BROWN:—This finds me in the fine town of Barre. It is a good farming township, especially in the south part. I have had a good opportunity to examine some of the best farms here, and find them to compare favorably, with any farms in the State that I have seen. I have been much pleased with Dr. J. N. BATES' place. Dr. Bates is secretary of the Worcester West Agricultural Society; he is a practical physician, and a fine agriculturist. His place is very finely situated on the west side of the common, and extends back to the south and west, embracing forty acres of the best of land. He has now on his place, about four thousand fruit trees, mostly young trees, of the best quality that can be produced. Among other things that attracted my attention, was an artificial *trout pond*, fed from a fine spring; this pond is about twenty feet square, and walled up all around, leaving places for the fish to go under. The doctor raises his fine *pan fish*, as well as his *poultry* and *swine*. He thinks that most farmers might raise their own fish in the same way, by a very little trouble and expense. The doctor is a strong man in the agricultural community, and is chosen one of the delegates to attend the agricultural convention at Washington. I find very many farmers in my travels that think in order to be a good *newspaper farmer* a man must be worth some *ten thousand dollars*, or in other words rich. This is a great mistake, and should be eradicated from the minds of farmers, especially the younger ones, who are soon to take the places of their fathers. The young man in my opinion, can enter upon the labors of farming with better hope of success than the merchant or mechanic. Let our young men come up to the work, scientifically, energetically, and a new era will open up in the department of scientific agriculture. J. ROBINSON.

Barre, June 5, 1852.

MCCORMICK'S PATENT VIRGINIA REAPER AND MOWER.—The attention of those having large crops of grass and grain to get in is called to this important machine. We have never seen the machine in operation, but have examined fields where the grain has been cut by them. On one field, where the owner informed us he cut *twenty-one acres* the first day he used the machine, the work had been performed in the most thorough manner, saving, it was stated, an amount of grain equal to the wages of the cradlers in cutting the same quantity.

In an advertisement in another part of this number, the reader will find the name of the general agent, prices, and a more particular description of the machine.

For the New England Farmer.

WHAT KNOWLEDGE IS MOST VALUABLE TO THE FARMER?

MR. EDITOR:—It has been to my great gratification and instruction that I have, from time to time, in a long course of years, read the columns of various of the agricultural journals of the country, and studied the important knowledge with which they are filled. The benefit which has been derived from them to the working farmers and to the country is beyond calculation. They have evidently infused into the farmer the conviction that he had been long toiling in such a mode that comparatively little profit resulted from his labors. He has become impressed with the "sober second thought" that he was not, as he had formerly imagined, in fact possessed of the whole knowledge of his art. He has been made to realize, and to confess to himself, that the mystery of farming involves something more than the handicraft of the business, and that though he may have a great skill and adroitness in the manual and mechanical routine of the farm, he may still be very unskilled in this art, the greatest as well as the most useful of all pursuits. This conviction has filled him with the desire to obtain the requisite knowledge. It has been manifest, from the discussions had at the State House during the past winter, that there is a determination to have the proper knowledge placed within the reach of the farmer. Those discussions, and the writings upon the subject which have come under my eye, have suggested the question, What *is* the most important knowledge to the farmer?

It seems to be assumed generally by writers and speakers upon the subject that the science of chemistry includes all the knowledge that is involved in agriculture, and I have even heard it plainly intimated by the speakers that a chemist is, of course, a scientific agriculturist. Now I think there is a great error in this. Chemistry, so far from being the whole sum of agricultural knowledge, is not even the most important of the sciences involved in it. The first knowledge necessary to the farmer is that of the elements of which the vegetable structure is composed. That knowledge is not any part of the science of chemistry. The structure of plants, whether we refer to the elements or to the mode of their composition and growth, is taught by vegetable physiology, not by chemistry. It is true that the chemist's science, (if every physical analysis is chemistry,) may be applied to this, as to other matters in the material universe, and may be used to ascertain by analysis what the several elements of a plant, as of any other composite body, may be: but in this particular application it is only a part of the other science, physiology. The second inquiry is, in what manner the several elements may be introduced into its organism and made a part of the plant. This is purely a question of physiology, not of chemistry. It is to be determined by a knowledge of the structure of the plant, and of the functions of the several parts. This will show by what mode the plant is enabled to appropriate its food and to assimilate it to its system. It would be useless that a farmer should know only what kind of food,

whether animal or vegetable, or what particular species of either, was most appropriate and beneficial to any of his working animals or other live stock, if he was at the same time so ignorant of the habits of the animal as not to know by what mode it would take the food, and should administer it, as did the crane of the fable, when she invited the fox to supper, in such a mode that the creature was physically incapable of receiving it. And as the hungry fox left the supper untasted, so may the hungry plant famish and die while food is abounding around it, if not disposed so that it may be taken up into the vegetable organism. The knowledge of the diseases of plants and their remedies is also depending on this science.

But neither is it to be expected that a farmer, if competent to the task, would employ himself in making analyses of his plants to ascertain what particular food is most appropriate. He will learn this from the agricultural journals, or other sources to which he may go to find the result of the analyses which have been made by the chemist. This, in whatever way acquired, is a highly important knowledge. I do not mean to underrate its value. It is highly necessary that he should know that of the fifty-five simple substances or elements which compose all organized and inorganic matter, the vegetable world is constituted principally of only four; three of them only in large proportion, carbon, oxygen, and hydrogen; and in a less degree nitrogen, and that of these carbon is the most abundant: that the hardness of wood is owing to the carbon; that nitrogen is an important ingredient in gluten, to the more or less of which is due in great measure the nutritious property, and the adaptation to peculiar culinary purposes of wheat: and that ammonia, silica, potash, soda, and the carbonate, oxalate and phosphate of lime, enter into the composition of various plants. Having this knowledge, he may understand what is taken away from his land by the different crops; and what should be added to keep up or increase its fertility. But so apt are we to take a one-eyed view of things, that many men anxious for the improvement of the farmer have considered this knowledge as pre-eminent, while others I fear consider it to be the whole sum of agricultural science, and overlook entirely the vastly more important science of vegetable physiology. The structure of the vegetable and of its different parts; the function of root, stem, leaves, flower; the uses of each part in the general vegetable economy; the whole economy itself; and the diseases of the vegetable life, are, beyond all other knowledge, practically useful to the farmer. By this he knows how the proper nourishment is taken up, how, by what agency, and what mode, it is carried through the plants, how it is elaborated and assimilated, the changes wrought in the vegetable tissue, and the periods of ascent and descent of the sap, the effect of temperature and moisture upon plants and seeds; the season of transplanting; of cutting timber and various other matters of greatest benefit in the management of the farm, and in rural economy. A man may have the highest chemical knowledge, but without the other his knowledge will be of no value in agricultural practice. A chemist may have no more knowledge of farming than a blacksmith or other artizan; nor even to a practical farmer will chemistry be of very great advantage in the operations of husbandry, unless united with a knowledge of physiology. It is only by a union of the two sciences that chemistry can be practically applied to agriculture.

Essex, April 28, 1852. W. J. A. B.

THE SEASON.

The month of May was too dry and cold to be favorable for the grass crop, and to nearly the middle of June there had but little rain fallen during that portion of the month. Grass did not get well set, and therefore is thin at the bottom, and the crop at present is not very promising.

Grain and corn look strong and healthy. July and August are the months in which the corn crop principally grows; if they are hot and give seasonable showers a fair crop may be expected, although the plants may be backward on the first of July.

Very little rain has fallen up to this time in June, and when it has come has been succeeded by strong cold winds, mostly from the southwest. The moisture has been carried off with extreme rapidity by these winds, so that the surface has become dusty in a few hours after the rain has fallen.

Squashes, melons, tomatoes, and most of the garden vegetables, appear well—of good color, stocky and strong, and with a hot mid-summer and seasonable rains will yield an abundant crop.

There has been frost several nights in the first half of June, but mostly confined to low grounds, and not so heavy anywhere as to injure vegetation materially. There was frost on the night of the 11th. Upon the whole, the season at this time is rather unpromising, and reminds us of the descriptions of the summer of 1816, when it was said that frost made every month in the season.

There is, then, the greater necessity for frequent hoeing and the most careful cultivation, which will do much towards obtaining a good crop.

CULTURE AND IMPROVEMENT OF NATIVE FRUITS.

Messrs. Editors:—I have been frequently surprised that more attention is not paid to the culture of our native indigenous berries and nuts. Who has not noticed the superiority of the chestnut, walnut and other native nuts when grown in a cultivated field, over those taken from the thick forest; and how much larger, sweeter and finer, those taken from some trees than others? This shows their susceptibily of improvement. But how few have ever left natural trees of the chestnut, walnut, butternut, or any other of our delicious native nuts, to grow around their fields; much more to transplant or set them out. I have seen children of large farmers, go a long distance and trespass on the grounds of others, to obtain these indigenous fruits of our soil, when a little care on the part of their parents would have given them these fruits in plenty. This may seem a small subject, but to the younger rural population it is of considerable importance, and not beneath the notice of children of larger growth.

Again, our native berries—the blackberry, whortleberry, &c., such large quantities of which are annually hawked about the streets of our cities—is there no chance for improvement? Has not every one noticed the superiority in size and flavor of some berries over others? Last season, in passing through one of my fields, I noticed a blackberry bush the fruit of which was nearly twice as large as any I had ever before seen, and as much superior in flavor as in size. I intend to transplant and cultivate this, and I hope some day to present you, Mr. Editor, with a dish of "improved blackberries." Would it not be advisable for our agricultural societies to offer premiums for the best display of our native berries? Perhaps we might soon see as great improvement in these, as in strawberries and other fruits.—*Rural New-Yorker.*

FEEDING STOCK.

Auburn, Dec. 23, 1851.

T. C. Peters:—Dear Sir,—In the fall of 1850 I weighed out two tons of hay, and bought one hundred and thirty bushels of shorts, and put them in a barn by themselves. The hay cost $12, and the shorts 10 cents per bushel—$13 50; in all $25 50. On the first day of December, 1850, I put in the stable three milking cows, and fed them on the above hay and shorts as follows:—One bushel of cut hay with three quarts of shorts to each animal, three times a day from Dec. 1, 1850, to May 10, 1851, making 160 days in all. They were fed regularly, and the feed carefully measured. The cows gave twelve quarts of milk a day, each, all this time, and came out in the spring good beef. This is three bushels of cut hay and nine quarts of shorts per day to each animal, which I think is wintering cattle cheap. The above are the facts of the case; if you think them worth anything you can put them in shape to suit you, if not, pass them by as worthless. The weather is very cold, and has been this month.

I am now feeding in the same manner, and have done so for the last four years. It is the only way farmers should feed, as it more than pays to cut every thing that is fed at this time. Cut all hay and straw, grind all corn and oats, and stable all stock, and then farmers will be doing their duty to their stock.

I am yours respectfully, John B. Dill.
—*Wool Grower.*

Remarks.—We are happy to see an increased attention given to this subject, believing that a large amount of fodder may be annually saved by a more systematic course of feeding. Although we have entered into no exact experiments in the feeding of cut and uncut fodder, we have come to the opinion that a horse, for instance, may be well kept at about one-half the expense by having the same quantity of meal usually fed to him mixed with cut hay. We have come to this opinion by observing the effect upon the animal and the quantity of feed used, through a long practice in both ways of feeding. The profits of the farm are increased just in proportion to the saving of fodder, provided the stock thrives as well with the less quantity.

For the New England Farmer.

EVERY MAN A SOVEREIGN.

BY N. C. TOWLE.

My Dear Farmer Brown:—Some six months ago, while I was luxuriating in the enjoyment of my annual privilege of inhaling the invigorating atmosphere of my native New England hills, I had the pleasure of visiting your beautiful town of Concord—so glorious upon the pages of our country's chronicles, as the soil privileged to imbibe the first precious libation of the dawning spirit of Liberty; then scarcely visible in the horizon, but now beaming an effulgence that makes the Russian bear pant and tremble amid the icebergs of his arctic lair. That libation was distilled in the hearts of the sons and daughters of the farmers of New England.

Content to course quietly through the veins of the unobtrusive cultivators of the plain and hillside—with no ambition but to infuse life and vigor and healthful enjoyment, and to feed the perpetual fire that burned upon the domestic altar—yet its province once invaded and its rustic altars overthrown, it burst forth with a power and fervor that confounded and overwhelmed the mighty hosts of its enemies, as the dry stubble disappears before the consuming fire. Such was the blood that flowed in the veins of our sires. It did not inflame the brain with ideas of pride and conquest and glory, to be gratified by injustice and oppression and interference with the rights and independence of others. It bore the good old Yankee motto, "Mind your own business." It bore the invincible, indomitable love of personal and individual freedom; and it had the wisdom and sagacity to perceive its own right to freedom, and its obligation not to interfere with that of others, were inseparable. It said—"Cultivate your own farm in your own way—let your neighbor enjoy the same freedom. He is God's image as well as you—why should you intermeddle in his affairs? Will you permit him to meddle in yours!" "If your neighbor chooses to plow shallow and skim the surface—show him, by the superiority of your crop, the advantage of the *sub-soiler*. If he insists that a luxuriant growth of weeds improves his crops—show him what good husbandry will do for yours." These were the precepts of our good old New England fathers, and they applied them as well to their moral, religious and political circumstances, as to their farming operations. They claimed no supervision over each other's farm, or church, or form of civil government. Massachusetts took no cognizance of the fact that the proprietary and governor of the neighboring colony of Pennsylvania wore his hat in church, and denominated Sunday "First Day," nor of the still more ominous fact that the government of Maryland tolerated and even encouraged the catholic religion—nor did the episcopalians of Virginia call the round-heads of New England to account for substituting *Thanks giving* and pumpkin pies in the place of Christmas and plum-puddings. The conscious dignity of freemen would have induced either to have indignantly repelled any attempt of another to enforce the adoption of her innovations or peculiarities—but each was content to leave the other in the same freedom, she was determined to maintain for herself. And hence it was, that when this principle of individual, social and civil liberty and independence, which had impelled the

May Flower through the surges of the Atlantic, and had sustained the quaker, the catholic and the cavalier, in their struggles with the wilderness and the wild man—when that principle was invaded—when that inalienable attribute of a *man*—which distinguishes him from a biped, was assailed—every heart was *stout*, every hand was nerved, and every noble eye was fixed upon the point of attack.

The ox stood still in the furrow, and the plowshare slept in its place—the young wife received the burning kiss of her stout-hearted husband and freely poured out her heart's life to secure that, without which the widowed wife and the childless mother were to be envied; for *she* could not look down through a long succession of posterity bearing the badge of bondmen and bondwomen. From the moment that the heel of the tyrant's mercenary foot marred the farthest verge of our soil, the electric spark culminated at the peaceful fire-side of the most distant and secluded hamlet. Every farmer became a soldier. The battle was fought—and when the smoke had risen in dense masses from the bloody field, not a trace of the insolent foeman remained. Freedom was vindicated, and her heroic sons eagerly exchanged the field of glory for the field of wheat and barley—the sword and musket for the sickle and plowhandle—and the "pride and circumstance of glorious war," for the charms and cheers of rural paradise.—Such was the race from which we have descended. Mighty and invincible on the field of battle, but still mightier and the heroes of more glorious conquests upon the fields of nature. Every man was a sovereign "by the grace of God," and no human power presumed to demand fealty from the weakest among them.

But I beg many pardons for this wide and wholly unpremeditated digression. I took up my pen for the simple purpose of expressing my acknowledgments for the pleasure I enjoyed during my visit to your beautiful "domain," and to avail myself of your kind offer to introduce me to your numerous readers; and if they shall deem me worthy of their acquaintance, I will endeavor, in some future communications, to give them an account of my observations on the state of the science and practice of the great art of agriculture in these regions. For although I am not, at this time, immediately engaged in "tilling the ground," it is the *profession* to which I was raised, for which I still retain the strongest attachment, and to which I shall eagerly return whenever I can see my way clear to do so. My love and admiration of its dignified independence has not abated in consequence of my experience or observation in connection with other pursuits. Cincinnatus and Washington acted from the dictates of elevated wisdom when they relinquished the marshal's *baton* and the robes of state for the implements of husbandry. No other condition in life combines so many requisites to true and manly enjoyment, and at the same time so effectually avoids the annoyances and anxieties that attend, to a greater or less degree, nearly every other pursuit. The farmer is not dependent upon the fluctuations of trade, the rise and fall of stocks, or the smiles and frowns of power. He sits under *his own* roof, and *his own* fig-tree. He eats the fruits of *his own* soil and *his own* labor. His only superior, before whom he bows in dignified and grateful homage, is that great and beneficient Being, who "causes his sun to shine upon the good and upon the evil, and sendeth rain upon the just and the unjust." Whatever changes may come over the face of the earth, in the progress of ages and centuries—sweeping away the vestiges of human grandeur, obliterating the landmarks of states and empires and mingling with the common earth, the proudest monuments erected to memorialize the worst of deeds, "seed time and harvest shall never fail." He, who "replenisheth the earth," shall not fail of a successor to occupy his place and to enjoy and perpetuate his honors and his virtues.

Yours, very truly, N. C. T.

Washington City, March 30, 1852.

For the New England Farmer.

MULCH—MULCHING.

Editor N. E. Farmer:—In your paper of June 5, after remarking "that the only definition of the word MULCH in Webster's Dictionary is *half rotten straw*," you say that "in Worcester's Dictionary we do not find the word."

We do not see why you did not find it, for on page 470 of the Universal Dictionary of Dr. Worcester, you will find, "MULCH, noun, *straw, leaves, litter, &c., half rotten;*" and again, "MULCH, verb active, *to cover with litter or half rotten straw, or with manure;*" so on page 261 of Worcester's Comprehensive Dictionary, edition of 1851–2, you will find substantially the same definitions.

As your paper circulates extensively in New England, and the article will be read, being a valuable one, we will thank you to insert this in your next. Yours respectfully,

JENKS, HICKLING & SWAN,
Publishers of Worcester's Series of Dictionaries.

Remarks.—The edition of Worcester's Dictionary which we happened to take up, in looking for the word *mulch*, was of 1846. There it was not to be found; but Dr. Worcester and his enterprising publishers having none of the Rip Van Winkle tendencies, have progressed with the age as it rolls along, and have not only given the term *mulch* a "local habitation," but we believe a large number of other words and phrases not to be found in similar works. We supposed the word had not been generally introduced into the dictionaries.

A NEW LAMP.

The following extract is from a private letter.—We give it in order to open the way for this new light, believing that great improvements may and ought to be made in lighting our rooms.

"You have so often mentioned the great danger arising from the use of fluid in lamps, that it will be of some interest to you to learn that after an incessant study of eight years I have succeeded in constructing a lamp which is, I think, superior to all now in use. It is based on the application of two philosophical principles, and having no kind of machinery about it, it is very easy to manage and is not liable to getting out of repair. Last winter I made a great many experiments with it in the presence of a number of scientific men; its light was measured with a photometer, and com-

pared with that of other lamps. The result showed that, 1, it produces from two to two and two-thirds (according to the size of the wick) times as much light as a common glass lamp with two solid wicks from *the same quantity of oil*, in a given time; 2, the light remains *perfectly unchangeable* during the time the lamp is used; there is not the slightest *decrease* or *increase* of it. This I consider as very important; for nothing impairs the eye-sight more than the gradual and imperceptible change of light in the common lamps; 3, as the capillary attraction of the wick is entirely dispensed with, the *poorest oil is just as good for it as the best;* 4, it requires no trimming during five or six hours when in use; 5, it is very elegant in its form, and admits of all kinds of ornament; but it can be made for 75 cents.

THE PROPER PERIOD TO APPLY LIQUID MANURE.

The great importance of the liquid manure question, and the numerous inquiries made of us as to the application of this fluid, lead us once more to resume the subject, restricting ourselves on the present occasion to a single point, namely, the period in the growth of a plant when it may be most advantageously applied, or should be altogether withheld.

In order to understand this part of the question, it must be borne in mind—1, that *liquid manure is an agent ready for immediate use*, its main value depending upon that quality; 2, that *its effect is to produce exuberant growth;* and 3, that *it will continue to do so as long as the temperature and light required for its action are sufficient.* These three propositions, rightly understood, point to the true principles of applying it; and, if they are kept in view, no mistakes can well be made. They render it evident that the period in the growth of a plant, at which it should be applied, depends entirely upon the nature of the plant, and the object to be gained.

If, for example, WOOD and LEAVES are all that the cultivator desires to obtain, it will be evident that liquid manure may be used freely from the time when buds first break, until it is necessary that the process of ripening the wood shall begin. Wood cannot ripen so long as it is growing; wood will continue to grow as long as leaves form, and its rate of growth will be in direct proportion to their rate of development; therefore, in order to ripen wood, growth must be arrested. But the growth of wood will not be arrested so long as liquid manure continues to be applied, except in the presence of a temperature low enough to injure or destroy it. Hence it is obvious that liquid manure must be withheld from plants grown for their wood and leaves, at the latest, by the time when two-thirds of the season shall have elapsed. To administer it in such cases towards the end of the year would be to produce upon it an effect similar to that caused by a warm wet autumn, when even hardy trees are damaged by the earliest frost.

In the case of FLOWERS it is to be remembered that the more leaves a plant forms the fewer the blossoms in *that season;* although perhaps the more in a succeeding season, provided exuberance is then arrested. The application of liquid manure is therefore unfavorable to the *immediate* production of flowers. It is further to be remarked that even although flowers shall have arrived at a rudimentary state at a time when this fluid is applied, and that therefore their number cannot be diminished, yet that the effect of exuberance is notoriously to cause deformity; petals become distorted, the colored parts become green, and leaves take the place of the floral organs, as we so often see with roses grown with strong rank manure. In improving the quality of flowers, liquid manure is therefore a dangerous ingredient; nevertheless, its action is most important, if it is rightly given.—The true period of applying it, with a view to heighten the beauty of flowers, is undoubtedly when their buds are large enough to show that the elementary organization is completed, and therefore beyond the reach of derangement. If the floral apparatus has once taken upon itself the natural condition, no exuberance will afterwards affect it; the parts which are small will simply grow larger and acquire brighter colors; for those changes in flowers which cause monstrous development, appear to take effect only when the organs are in a nascent state—at the very moment of their birth. Hence it is clear, that in order to affect flowers advantageously by liquid manure, it should be given to plants at the time when the flower bud is formed and just about to swell more rapidly.

With FRUIT it is different; the period of application should there be when the fruit, not the flowers, are beginning to swell. Nothing is gained by influencing the size or color of the flower of a fruit tree; what we want is to increase the size or the abundance of the fruit. If liquid manure is applied to a plant when the flowers are growing, the vigor which it communicates to them must also be communicated to the leaves; but when leaves are growing unusually fast, there is sometimes a danger that they may rob the branches of the sap required for the nutrition of the fruit; and if that happens, the latter falls off. Here, then, is a source of danger which must not be lost sight of. No doubt, the proper time for using liquid manure is when the fruit is beginning to swell, and has acquired, by means of its own green surface, a power of suction capable of opposing that of the leaves. At that time, liquid manure may be applied freely, and continued, from time to time, as long as the fruit is growing. But, at the first sign of ripening, or even earlier, it should be wholly withheld. The ripening process consists in certain changes which the constituents of the fruit and surrounding leaves undergo; it is a new elaboration, which can only be interfered with by the continual introduction of crude matters, such as liquid manure will supply. We all know that when ripening has once begun, even water spoils the quality of fruit, although it augments the size; as is sufficiently shown by the strawberries prepared for the London market, by daily irrigation. Great additional size is obtained, but it is at the expense of flavor; and any injury which mere water may produce, will certainly not be diminished by water holding ammoniacal and saline substances in solution.—*London Gardener's Chronicle.*

THE WOOL GROWER.—This work is hereafter to be published at Rochester, by D. D. T. MOORE, Esq., of the *Rural New-Yorker*, but conducted by T. C. PETERS, Esq., its former Editor. It is the

only work among us devoted to the wool growing interest—has been conducted with ability, and is printed in a neat and attractive form. We hope the "woolsack" will be plump and easy under the editor, and that friend Moore's twins will multiply and replenish as rapidly as do rabbits.

A REMARKABLE MARE.

The mare owned by me was raised in Hopkinton, N. H., and was brought to Rockport in the fall of 1832, being then between five and six years old. She is of a deep bay color, about fourteen hands high, and weighs in her best condition scant 800 lbs. She has been owned in this place, and used as a let horse, successively by Messrs. Gen. Gott, Jabez Gott, Jr., and Choate & Hadlock, until last July, when she came into my possession. So that her employment in that capacity falls short of nineteen years but a few months. Each of the above named gentlemen are ready to vouch for the statements I shall make respecting her, and are willing to add a little something on their own responsibility.

Whenever a horse was wanted for a journey that required speed and endurance, this mare was invariably called for. To carry two men in a chaise, from Rockport to Boston and back, a journey of 70 miles; to drag a carry-all, with four persons, to Salem and back, 42 miles; were common daily performances with her. She has seen Boston and Rockport as many as five times in six weeks. In her prime she was often hired by a stone-contractor, who lived nearly two miles out of this village. To his house it was usual to send her in the morning, from whence he would drive her to Charlestown bridge and back—not always alone—and return her to the stable in the evening, making the distance of her travel upwards of 75 miles. Recently he assured me that he once drove her to Charlestown in 3 1-2 hours, stopping in Salem about half an hour, and returned the same day. This was at the rate of 12 miles an hour. About this time, she came from Ipswich to this place, 18 miles, in an hour and a quarter.

When about 11 years old, she had seen so much hard work, and had had so many hard drives, that it was thought she must be worn out; and she was offered for sale for $75, without a purchaser. Subsequently, however, she was sold for over $100; and since this latter period, it has cost nearly $5000 to keep a horse in the stable by the side of her. Three horses, valued at upwards of $100 each, subject to the same service with her, and often favored at her expense, have been completely used up. One of them returning from Salem in company with her at noon in the hottest day of the summer of 1840, the mare having the hardest of it, died within an hour after his arrival. While the mare was in harness the next day, as if nothing had happened.

In January, 1843, she went with a sleigh to Salem in an hour and three-quarters, stopped there one hour and a quarter, and returned in an hour and fifty-five minutes—42 miles in three hours and forty minutes. Not long before this period, she carried four persons in a heavy carry-all to Salem in the forenoon, returned with them late in the evening, and at midnight was harnessed to the same vehicle and sent back in urgent haste, to return early the next morning with two persons. Thus, in scarcely more than twenty-four hours, dragging that carry-all, with its load, 84 miles.

Rockport, Feb. 14, 1852. B. Haskell.

SORREL.

The presence of sorrel indicates an acid soil. It is a sour plant, and thrives only on such lands as are destitute of calcareous matters; consequently, the application of the latter in sufficient quantities to correct the acidity suggests itself as the most effectual method of getting rid of it, and rendering the soil fit for profitable cultivation in other and more desirable crops. Yet the quantity of soil on which this plant is naturally produced, precludes the hope that it will ever be entirely eradicated, and it hence becomes a part of farming to know in what manner it can be most sucessfully economized, and rendered valuable as an article of animal sustenance or food.

There are, indeed, but few vegetables, however mean and valueless they may be considered, which do not possess some quality capable of redeeming them from the hasty yet common charge of utter worthlessness; and of this order we regard sorrel. As a food for horses and sheep, it not only possesses considerable value, but if chaffed, and mixed with meal, it will fatten them as rapidly, perhaps, as English hay prepared in the same manner. Fed to these animals in its natural state, and without any accompaniment, it is found to retain them in health and heart, and the seed ground and made into "*mush*," is said by those who have had no inconsiderable experience in feeding it, to be equal to Indian corn. Yet no farmer will ever cultivate sorrel as a farm product. It is exhausting in the extreme, and it is only when it obtrudes itself upon him, spontaneously, that he should endeavor to render it of any account.

The only effectual method of extirpating it is to sweeten the soil by liming, or to increase the staple to a degree which will promote the development of more valuable herbage, and cleanse the soil thoroughly by a succession of manured crops, such as corn, potatoes, or some other vegetable which is cultivated exclusively with the hoe. The seed of the sorrel is not only abundant, but it is so invested in an integument, or horny involucre, which possesses the power of preserving the vital power unimpaired for years, when placed by circumstances so deep in the soil as to be beyond the influence of those vitalizing principles upon which germination is found mainly to depend.

This peculiarity of the seed explains why sorrel so often appears after long pasturage, and the disappearance of the plant from the surface of the soil where it has previously grown.

☞ The excesses of our youth are drafts upon our old age, payable with interest.

DEVON HEIFER.

The heifer represented above was the property of GEORGE SHAFFER, who exhibited her at the State Fair at New York last fall; where she was pronounced a fine animal. To our eye she is not a remarkably fine specimen; being heavy in flesh she does not present those neat and clean proportions usually remarkable in the Devon stock. We have seen a mixture of the Devon and Short Horn blood in heifers that brings out the most commendable points. In giving most of the popular breeds of stock, our readers will be able to make such comparisons as may be of advantage to them in the selection of their animals.

A TREE QUESTION.

The *N. H. Statesman* says the question has been agitated in that vicinity of late, whether the lower limbs of trees increase in distance from the the earth as the trunk increases in height. The question arises thus: "The subject was the great freshet of 1785, and mention being made of a notch upon a big elm at the foot of Butter's Hill, indicating the height of the water that year, query was thrown in whether that notch was not delusive, since it might have ascended with the growth of the tree! The matter was discussed, but not fully decided." The question of the ascent of trunks is still open for debate, but the *Hartford Courant* says there is no doubt at all—adding:—"All trees grow by an outward expression, and the base of the limbs never change their place. The case of the pine trees in the forest furnish no exceptions. Where a number of trees grow closely together, there is a reaching upward for the light and air. As the trees grow tall, the lower limbs, unable to reach the source of their stimulus, die for want of it, leaving to the observer of the full grown tree no traces where they once were."

THERMOMETER CHURN.

In making good butter, each operation is a nice one, requiring the utmost cleanliness and care. Regular rules are frequently laid down, which are undoubtedly of some service to the inexperienced. But those taking an interest in the operation, and having a determination to excel, will soon acquire all the skill necessary to produce the richest and sweetest butter.

In churning, it is of great importance to have the cream or milk of a proper temperature, which is about 62 degrees. The thermometer churn affords this advantage, together with convenience, despatch and exactness. The churn is encircled with a case for water, by which the desired temperature may be obtained and indicated by the thermometer permanently fixed in the end of the churn, where it is not liable to injury. We have used it for several years with good success.

The churn is simple, portable, light, and durable, easily separated and cleansed. They are made of various sizes, and the price is moderate.

For an engraving and description of this churn, see Vol. I. of the *Farmer*, page 227.

GARDENING.

We are happy to notice a new movement in this delightful art. In the good old town of ANDOVER, in this State, some of the citizens have formed themselves into an association to promote the interests of farming, gardening, and ornamental scenery, in the town. This will undoubtedly be the means of the formation of a horticultural society, or some permanent organization which will arrest the attention of those able to make improvements and inculcate new views and desires in many who

have never yet given the subject a thought. We hope the general committee will find their most sanguine hopes realized.

BOOKS.

THE FARMER'S CYCLOPEDIA OF MODERN AGRICULTURE, is a beautifully printed volume of nearly 500 pages, and issued by SAXTON, N. Y., the Agricultural publisher. Like all his publications, it comes into the world in a neat and attractive form, and is illustrated with a great many engravings of animals, farm implements, poultry and insects.

This work is prepared by the Rev. JOHN L. BLAKE, a scholar, a close observer and student of nature, and a gentleman whose tastes and sympathies have had such a leaning to rural affairs as to lead him to devote a goodly portion of his life to the wants and interests of the farmer. The book cannot fail to have a widely-extended circulation and become eminently useful.

The following brief extracts from the preface foreshadow the author's design, in part, in preparing the work:

"It is the design of the author, in all his labors for rural localities, to improve the mind as well as the soil. Indeed, such labors for the former will ultimately prove of more benefit than those having exclusive reference to the latter. If the one is duly promoted, the other will follow in its wake. Whenever a rural population becomes imbued with a well-cultivated literary taste and a love of science, there need be no apprehension that agriculture will be neglected, or that it will fail to be duly appreciated. Rarely will the soil receive a defective culture, except from the ignorant and the illiterate.

"It has sometimes been thought by farmers that a book, having particular reference to their vocation, is necessarily filled with oxides and silicates, or with sulphates and phosphates; that the mental food of the scientific agriculturist is a compound of caustics and volatilized poisons; and that his very breath and clothes are so impregnated with carbonates and alkalies, that they cannot approach him without a kind of suffocation. Misapprehensions of this sort must be removed. Prejudices of this nature must be overcome. If not, the treasures of chemical knowledge will do little in renovating the soil. On the contrary, sterility will increase, till the wand of desolation passes over the broad earth. We labor to overcome these obstacles—to progress in rural economy."

MAINE BOARD OF AGRICULTURE.

Among the acts passed by the late Legislature of Maine, was one establishing a Board of Agriculture. The act provides that each of the incorporated agricultural societies in the State shall, at their meeting in the fall, choose a member of the Board of Agriculture. The duty of the Board is to discuss such subjects as pertain to the agricultural interests of the State; to devise and recommend, from time to time, to the several agricultural societies, and to the people, facts, improvements, discoveries and views in regard to the condition and future prosperity of agriculture in the State; and to annually make to the Legislature, through the joint standing legislative committee on agriculture, a report which shall be published by the Legislature as a public document for distribution among the people. The Secretary of the Board is to receive one hundred dollars annual salary, and the members are to be paid not exceeding two dollars per day for their services. The Board will hold its annual meetings at Augusta, on the third Wednesday of January.

FLAX AND FLAX-COTTON.

Gov. Farwell, of Wisconsin, has written a lucid and forcible letter to the State Agricultural Society, urging the propriety of a far more extensive cultivation of Flax in that State. Wheat has proved a very uncertain crop there, and some other staple must be extensively substituted. Gov. Farwell shows clearly that the climate and soil of Wisconsin are admirably adapted to the growth of flax; that $25 per acre would not be a large average yield, while $40 per acre may be obtained; and that the importation and sale of 10,000 bushels of seed at a cost of $15,000 would secure a crop worth at least $250,000 for the present year, and not less than $5,000,000 next year.

Mr. John Galbraith, who has grown flax in Waukesha County in each of the four last years, has had three good crops and one middling one. [During these four years, we believe there have been two or three signal failures of the wheat crop.] An efficient Breaking Machine is now in operation at Beloit, where flax straw is regularly purchased by the ton, rotted, dressed, and sent eastward to market. And if the Governor's recommendation is seconded, there will soon be similar establishments in nearly every county, with oil-mills, where seed may likewise be sold for cash.

The flax culture in this country will be considerably extended this season. Hon. Henry L. Ellsworth, formerly U. S. Commissioner of Patents, will sow 500 acres this season. As seed will doubtless be dear for a year or so, it is computed that $30 per acre may be obtained from good land well cultivated in the Eastern States. The labor is hardly equal to that required to secure an average yield of Indian corn. Twenty bushels of seed have often been grown on an acre, and this alone will probably be worth $25; while the straw will range from $5 to $10 per ton, as it shall be further from or nearer to breaking machinery. Twenty bushels of seed and two tons of straw are considered a fair yield per acre in England.

Four companies are now engaged in the manufacture of linen thread in this country—at Cohoes, N. Y.; Willimantic, Conn.; at Clinton, Mass.; and at Andover, Mass. The Cohoes thread was never excelled in Great Britain nor anywhere else. (There are probably others, but these we know.) And a company has just been formed to manufacture linen fabrics at Fall River, Mass., with a capital of $500,000. There ought to be thirty such companies organized and operating forthwith, and if the Tariff of 1842 were still in force, there would be.

In England, the business goes on prosperously.

One land owner will sow 2,000 acres of flax this year. Claussen's flax-cotton machinery is evidently gaining favor. His works at Stepney, near London, are a focus of public interest. There the *cottonizing* process (splitting the flax fiber by saturating it first in a solution of soda and then in one of sulphuric acid) is completed in a few minutes, and at a trifling cost. It has previously been steeped, however, in a cold solution of caustic soda, for some twenty-four hours.

In England, flax straw costs as yet some $15 to $20 per ton, delivered, while it may be profitably grown in this country for $5. We trust its production will henceforth be rapidly extended.—*N. Y. Tribune.*

COWS AND CARROTS.

We send the editor of the *American Farmer*, Baltimore, the original article which appeared in our columns, and which has called out so much valuable information upon a subject on which there was, and still is, a wide difference of opinion. That letter was written by one of the soundest minds and ripest scholars among us; a practical farmer and horticulturist, although not making either his principal business. It was a letter of inquiry, and we have no doubt has been productive of more good to the cause than any other column of agricultural matter which has been written in the union within the last twelve months. We think the editor of the *American Farmer* will not be disposed to find fault with it, when he has read the whole letter.

DOR-BUGS AGAIN.

These annual and inconveniently large and voracious visitors have appeared again. At dusk, they leave the retreat to which they resort during the day, and on noisy wing seek the tender leaves of the finest cherry and other fruit trees, the mountain ash, and sometimes the young elms, if other forage is scarce. They will rarely touch the common mazzard cherry tree if there are others near. They feed upon the soft part of the leaves, rejecting the nerves and veins of the leaf, which gives the tree, when thus defoliated, the appearance of gossamer or net work. Last year, we saved our trees by shaking the "varmints" from them at nine o'clock each evening; this year we have resorted to the suds of whale oil soap thrown upon the tree by a syringe. Now is the time to look out for them.

Extracts.—Mr. Oliver Blanchard writes that he has seen a heifer belonging to Mr. P. A. Sweet, which came in the 19th of April, and from the 21st of April to the 12th of May, she gave 167 quarts of milk more than the calf could take. After the calf was taken away, on the 13th of May, he saw the heifer milked, and she gave nearly 19 quarts, beer measure. She is half Durham, and weighed on the 20th March last *ten hundred and fifty pounds.*

Isaac Tabor, Jr., of Topsham, Orange County, Vt., owns a cow which brought a calf a few days ago, that weighed the day it came, one hundred and twenty-one pounds. The cow is a *native;* the calf one-fourth Devonshire.

William T. George, of the same place, has made the past year, (ending April 18, 1852,) from the milk of one cow, *four hundred* and *fifty-one* pounds of butter. The cow is a *native*, of medium size; and thirteen years old.

For the New England Farmer.

COAL ASHES.

Will you or some of your correspondents inform me whether coal ashes can be used with any benefit in agriculture? M. C.

June 2, 1852.

Mechanics' Department, Arts, &c.

SAFETY SHIPS.

A correspondent of the *Scientific American* makes the following suggestion:

"Safety-ships have been constructed in England, divided into water-tight compartments. A variety of other plans have been suggested at different times, some of which are very good. Would it not be sufficient to place under the decks and between the beams, tubes or compartments of India rubber or gutta percha, connected with numerous pumps on deck, which might be inflated at a moment of danger so as to support the ship with ease? These tubes or compartments can be made to lie close against the ceilings, and be kept there by pieces of wood, pressed by a spring, which would give by pressure from within. The whole contrivance is simple, in no way inconvenient, might be ornamental, and of but little expense. How much more consoling to run to the pumps to inflate these tubes (one-half of which ought to be made sufficient to support the whole vessel,) than to set to work in anxiety and doubt, amounting to despair, to keep the water out of a leaking, sinking ship."

Tunneling the Hoosack.—A correspondent of the *Springfield Republican* gives the following account of the state of operations at the projected Hoosac tunnel:

"The boring machine is on the ground, but as yet hardly resolved into its component parts. A mass of cast iron spokes, cogs, wheels, shafts, bolts, &c. &c., lay around us, out of which the workmen were slowly (for nearly every piece required a derrick and pulleys to get it into place,) re-constructing the ponderous wonder. The carriage for operating the machine is in place, facing a perpendicular side of solid rock, just off the actual line of the road, which has been prepared for the first actual experiment. The immense shaft was being hoisted into position, and then would come the wheel and its accompaniments, and then the driving power, which consists of engines of 100 horse-power, and for which a building was being erected. There have been many delays in getting the machine upon the ground, and in place, and we were told it would probably be six weeks at

least before everything would be ready for a start."

NEW MUSICAL INSTRUMENT.—Mr. Freberhuyzer, a musician of Albany, has invented a new musical instrument, the materials used for its construction being sea shells. The exterior of the shell is not disturbed, and retains all its rough attractions.—The mouth piece is fitted to a screw tube adjusted at the head of the shell. Along the sides the key holes are arranged at proper intervals, and the edges carefully lined. A valve lined with velvet, hinged at one corner, covers the mouth of the shell, and is compressed or opened as the character of the music requires. At the opposite and extreme corner of the mouth, the vent is left for the egress of the surplus air. The instrument, therefore, with the valves and keys closed, is air tight, and the variations in the size and natural organization of the shell, furnishes the change in the tone of the instrument. The music is said to be powerful and agreeable.

IMPROVED RAT TRAP.—An ingenious instrument has been invented by Mr. Seaward, a printer, at Indianapolis, Ind., which will be death on rats. To the treadle on which the bait is placed, is attached an iron lever, communicating with a wire spring, to which is fastened a sharp instrument, which revolves rapidly when the treadle is touched, hitting the rat between the peepers and knocking it six or eight feet from the trap, which resets itself instantly for another rat.

A NEW POWER PRESS.—The Lebanon, N. H., *Whig* states that Mr. A. H. Cragin, of that town, who has been at work for the last year upon a power press, has completed one which works admirably, and is capable of throwing off from 1500 to 2000 impressions per hour. It is entirely new in its construction, simple and compact—being less than seven feet in length by four feet wide, and is to be afforded for about $500.

Ladies' Department.

ANXIETY FOR CHILDREN.

None but affectionate, faithful parents themselves can estimate the tenderness and depth of anxiety which is felt in behalf of the child who has taken his departure from home to go and live and labor among strangers. As the fond mother puts in order the little wardrobe of her son, and overhauls every article of apparel, to see that no stitch is wanting, her eyes frequently fill with tears which she hastily wipes away, that she may not seem sad to her boy. She knows it is for the best that he should go, and she tries to appear cheerful and hopeful, that she may encourage him. And when the farewell hour comes she still tries to smile, and the father, too, summons his bravest look while the separation is taking place.

But when he is gone, and the stage or car is out of sight, how desolate seems that home. And why do the parents sit in silence and filled with anxious thought, or withdraw to the chamber of prayer, to commit their child to the keeping of the heavenly Father? Ah, they are thinking of the trials to which his moral principles may be exposed. They are contemplating the danger he is in of meeting with evil company; they tremble to think that his youth and inexperience may be no match for the temptations and snares to which, in his new situation, he may be exposed. They are not so much concerned for his success in acquiring wealth, honor or influence, as they are for his preservation from the corruptions of the world; and many are the prayers they offer that he may be kept sustained.

While we write, how many thousands of affectionate parents are anxiously thinking about their absent sons, and earnestly hoping that they may be guarded against the evils which surround them. Now the question comes up to their minds, "Have we endeavored faithfully to instil the lessons of virtue into their young hearts? Have we warned them against the dangers of bad example and evil company, and the infirmities of their own nature?" And if not, then may such parents reasonably fear the worst. For after the best efforts of the best parents, there is still reason for anxiety in behalf of sons who have gone from beneath the watch and care of home.

As there is no anxiety like that of fond and faithful parents for their absent children, so there is no duty more sacred and imperative than that binding upon children away from home, to afford good grounds of hope and confidence to their parents, that they are conducting themselves prudently, virtuously, temperately, in company with the virtuous and the honorable only. Let every youth who may read this, examine himself that, if his parents could see and know everything concerning him and his habits of life, they could rejoice over him as a worthy, true-hearted son.—*N. Y. Organ.*

RECIPES FOR THE SEASON.

We publish below a few excellent recipes adapted to the season, taken mostly from Mon. Soyer's new work.—*Modern Housewife.*

RHUBARB SAUCE.—If the rhubarb has a green spotted surface, it is a kind that may be cut up without peeling; if the red sort, the peel must be torn off before it is cut up. Cut the stalk into a stewpan in pieces about an inch long, and add about half its weight of sugar with a little water and spicing if liked; set it over a sharp fire, occasionally shaking the stewpan round, and when quite tender, pour it into a bowl to cool.

RHUBARB PIE.—Strip the skin off the tender stalks of rhubarb, and slice them thin. Put it in deep plates lined with pie crust, with a thick layer of sugar to each layer of rhubarb. A little grated lemon peel may be added. Place over the top a thick crust; press it tight round the edge of the plate, and perforate it with a fork, that the crust may not burst while baking, and let the juices of the pie escape. Bake about one hour in a slow oven. Rhubarb pie must not be quick baked. Some stew rhubarb before making it into pies, but it is best without stewing.

FRENCH ŒMELETTE.—Break six eggs in a basin, and add a teaspoonful of chopped parsley, and one of spring onion, half a teaspoonful of salt, a pinch of pepper, a little grated cheese and enough of crumbled bread to thicken it slightly. Put into a frying pan an ounce or a little more of butter, when melted pour in the batter and stir round with a spoon as soon as it begins to set, lightly move it

to that part of the pan opposite the handle, so that it occupies one-third, hold it so that part of the pan is the lowest, with a spoon move the outside edges over towards the centre, and let it remain half a minute, so that it obtains a good color, turn it over on the dish so that the bottom is at the top. They must not be too much done, and served very hot. This is excellent but may require a little practice to cook perfectly. Cold meats well chopped are good in place of the bread crumbs.

Boy's Department.

AN EXAMPLE.

A young man, (says Sir R. Kane,) wanting to sell spectacles in London, petitions the corporation to allow him to open a little shop, without paying the fees of freedom, and he is refused. He goes to Glasgow, and the corporation refuse him there. He makes acquaintance with some members of the University, who find him very intelligent, and permit him to open his shop within their walls. He does not sell spectacles and magic lanterns enough to occupy all his time; he occupies himself at intervals in taking asunder and re-making all the machines he can come at. He finds that there are books on mechanics written in foreign languages; he borrows a dictionary, and learns those languages, to read these books. The University people wonder at him, and are fond of dropping into his room in the evenings, to tell him what they are doing, and to look at the queer instruments he constructs. A machine in the University wants repairing and he is employed. He makes it a new machine. The steam-engine is constructed; and the giant mind of Watt stands out before the world—the author of the industrial supremacy of this country, the herald of a new force in civilization. But was Watt educated? Where was he educated? At his own workshop, and in the best manner. Watt learned Latin when he wanted it for his business. He learned French and German; but these things were tools, not ends. He used them to promote his engineering plans, as he used lathes and levers.

RESPECT FOR THE AGED.

There is something venerable in age. In all nations the highest respect has been paid to it. The hoary head, says Solomon, is a crown of glory, if it be found in the way of righteousness. The patriarchs were a kind of Lares among the tribes of their descendants. Among the Egyptians, the young were obliged to rise up in the presence of the old, and on every occasion, resign them the most honorable seat. The Spartans borrowed this law from them, and rigidly enforced it among their youth. They never thought of its "breaking the spirit" of their rising warriors to require this submission. Job sets it down as a mark of deplorable degeneracy among his people, that they that were younger than he, had him in derision. It stands imperishably recorded as one of Heaven's high commands, that honor is to be given to father and mother. This, too, is *the* command "with promise"—a promised blessing to those who obey, but an implied curse, yea, a cutting off from the land, to those who disregard it. It has been supposed that our republican institutions are not favorable to the growth of this spirit. There is the more need, then, that it be assiduously cultivated. The mind, even in infancy, should be deeply imbued with it. And "venerate the aged," should be, with our whole people, one of the fixed maxims of life, no one allowing himself any departure from it.—*Southern Presbyterian.*

Financial.—A teacher in one of our public schools, having occasion a few days since to punish one of his pupils for some misdemeanor, placed him on the platform to wait until he had heard some classes recite. The culprit took advantage of the teacher's engagement, and escaped from the school-house. The teacher, being somewhat vexed, promised another scholar a reward of twenty-five cents if he would bring the runaway back to the school-house; but before this was accomplished the boy who had escaped heard of the offered reward, and sent word to the teacher that he would "return and take the *licking* for twelve and one-half cents, cash down."—*Pawtucket Chronicle.*

Agricultural Gleanings.

The Crops.—The *Calais* (*Me.*) *Advertiser* of the 17th says:—The copious rains of Monday and Wednesday last, have materially changed the face of the fields and meadows, and everything now looks refreshed and invigorated, and the hopes and prospects of the farmer are much encouraged and strengthened.

In Louisiana, the crops are doing well, and the prospects now are for plentiful harvests. The corn crop will be overwhelming; some say corn will be two bits a bushel. The cotton, which has been somewhat retarded by cool weather in the latter part of the spring months, is now doing remarkably well.

A gentleman who has lately travelled through the counties of Jasper, Newton, Tyler, Jefferson, and Angelina, in Texas, says the crops in that section of country were never more promising than at present.

The crops in south-western Georgia are reported as unusually promising this year.

The Iowa papers concur in the opinion that notwithstanding the backwardness of the season, the wheat and other crops will be abundant. We have the same flattering representations from Northern Ohio, Indiana, Illinois, and the greater portion of Wisconsin and Michigan.

An Ancient Tree.—The old oak, beneath whose branches Eliot preached to the Indians, at South Natick, in 1690, is still standing—a "hale green tree," and still affords a grateful shade to the weary traveller. A neat monument has been erected to the memory of Eliot near this place, which bears on one side his name, and on the other the title of his Indian Bible—"Up Biblum God."

An Extensive Cheese Business.—George Herlep's great cheese factory, in Ohio, converts the milk of about 2,500 cows, belonging to farmers in the neighborhood, into the best cheese, by labor-saving machinery. The curd is made, sacked, and marked, by the farmer, and sent to the factory by a wagon which daily goes the rounds. Eight teams are thus employed. The curd is then weighed; sliced in a machine; then passed through the double curd-cooking apparatus; then through a machine which cuts it fine to powder, and salts it while passing through. It is then pressed, sacked, and again pressed. A machine sacks 240 cheese per hour. The factory makes 300 cheeses daily, weighing about 5000 pounds. Nearly 400 tons are turned out yearly. We gather the above interesting facts from the *Western Christian Advocate*, published at Cincinnati.

Sheep and Wool.—There are, according to the last census returns, 21,571,306 sheep in the United States and Territories, which annually produce 52,417,287 pounds of wool. Ohio and New York are the great sheep States, each producing over ten million pounds of wool, annually. Pennsylvania, Virginia, Indiana, Kentucky and Vermont stand next. The following are the sheep statistics of the New England States:

States.	*Sheep.*	*Lbs. of Wool.*
Maine	440,943	1,362,986
New Hampshire	384,757	1,108,476
Vermont	919,992	3,410,993
Massachusetts	188,651	585,136
Rhode Island	44,296	129,692
Connecticut	174,181	497,451
	2,152,820	7,094,734

A Nice Field of Barley.—A correspondent of the *San Joaquin Republican*, California, writes from Fort Miller, Mariposa county, that Major Miller was about to commence gathering one of the most plentiful crops of barley—of between 200 and 250 acres—ever seen in California. "On this occasion, he calls in the males of five tribes, making a perfect Waterloo army of red-skins; his vegetables of all kinds are plentiful. The Major is doing much to civilize the Indians."

Implements.—A trial of agricultural implements to take place at Geneva, about the 20th of July, has been appointed by the New York State Agricultural Society. Prizes are offered for the best implements tested. Those designing to have articles at the exhibition, are requested to give notice to the chairman of the committee of arrangements, John S. Pranty, before the 10th of July.

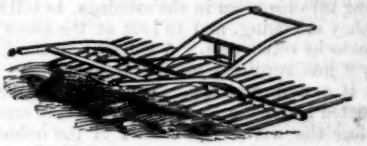
Cost of Manure.—It is said that the amount of guano annually used in Great Britain, for the last five years, has cost two million pounds sterling, or about ten millions of dollars—more than equal, yearly, to the cost of the Erie canal till its first completion. In addition, great quantities of lime, bones, shells, and immense piles of yard manure, have been applied to the land.

Seventeen Year Locusts.—As was predicted last year, the seventeen year locusts have made their appearance in Connecticut. In 1818, and in 1835, their presence on a lot of land about 50 rods square, some three miles from the North Glastenbury post-office, is chronicled. The woods on that spot are now alive with their music.

Strawberries.—Jason Heritage, of Burlington county, New Jersey, says an acre and a half of ground, planted with strawberries, will this year yield him, clear, $1000. Five hundred quarts were taken from the vines at one picking, on a little less than a quarter of an acre of land, which, at 50 cents a quart, yield $250.

Early Vegetables and Fruits.—On the 19th, Dr. Togno presented to the editor of the Wilmington, N. C., *Journal* two fine firmly-headed early York cabbages. Same day cherries were 20 cents a quart in Cincinnati, and the *Gazette* complained that strawberries were still 25 cents a quart.

Haying Tools.



1000 *dozen superior Grass Scythes.*

PHILLIPS, Messer & Colby's—Darling's—Farwell's—Mansfield & Lamb's—Keyes & Dunn's.
Also, Lawn, Grain and Bush Scythes, of the best quality.

1000 *dozen Scythe Sneaths.*

Patent Grass, Lawn and Bush Sneaths, from the best manufacturers in the country.

2500 *dozen Hay Rakes.*

Hall's, Simonds's, Carpenter's, Page & Wakefield's, Robinson's, Duggan's and English best Hand Rakes.

500 *Drag Rakes.*

This Rake is a hybrid between the Hand and Horse Rake; every good farmer should have one or more.

3000 *dozen Scythe Rifles.*

Clark's celebrated Whetstone Grit and Emery Rifles. Also, Austin's, Anson's, Willard's, and others.

200 *gross Scythe Stones.*

Quinebaug, Chocolate, Norway Rag and Indian Pond; also, Woodward and Talacre (English) Scythe Stones.

20 *tons Grindstones.*

A well selected assortment of the celebrated Blue Sheet, warranted. Also, Grindstones of all sizes, mounted on frames and rollers complete.

Grindstone Fixtures, viz.: Flanges, Arbors, Cranks and Rollers.

800 *Horse Hay Rakes.*

Delano's Patent, Revolving and Spring Tooth Hay Rakes; all of which will be sold at wholesale or retail, at very low prices, by RUGGLES, NOURSE, MASON & CO.,
June 15. tf Over the Market, Boston.

Bound Volumes.

BACK VOLUMES of the NEW ENGLAND FARMER, elegantly bound in Muslin, Gilt and Embossed, are now for sale at this office.
Boston, March 20, 1852 tf

The Farmers' Library.

JUST RECEIVED, the following assortment of Agricultural and Horticultural Books, embracing the standard works of eminent American and European writers, on the Farm, the Orchard, the Garden, &c. &c.

	PRICE.
American Farm Book, by Allen,	$1,00
Farmer's Treasure, by Faulkner and Smith,	75
Dana's Muck Manual,	1,00
Prize Essay on Manures, by Dana,	25
American Muck Book, by Browne,	1,00
Lectures on Practical Agriculture, by Johnstone,	75
Elements of Scientific Agriculture, by Norton,	50
Principles of Agriculture, by Thaer,	2,50
Practical Agriculture, by Johnstone,	75
Agriculture for Schools, by Blake,	1,00
Catechism of Agriculture and Chemistry, by Johnstone and Norton,	25
American Agriculturist, by Allen,	1,00
Liebig's Complete Work on Chemistry,	1,00
Farmer's and Emigrant's Hand Book, by Marshall,	75
Home for all, by Fowler,	50
Book of the Farm, by Stephens and Skinner,	4,00
Cottage and Farm Houses, by Downing,	2,00
Downing's Country Houses,	4,00
Rural Architecture, by Allen,	1,25
Downing's Landscape Gardening and Rural Architecture,	3,50
Downing's Cottage Residences,	2,00
Fruit Garden, by Barry,	1,25
Complete Gardener and Farmer, by Fessenden,	1,25
Bridgeman's Gardener's Assistant,	2,00
Bridgeman's Kitchen Gardener's Instructor,	50
American Fruit Culturist, by Thomas,	1,00
Gardener and Complete Florist,	25
Florist's Guide, by Bridgeman,	50
New England Fruit Book, by Ives,	56
Youatt and Martin on Cattle, by Stevens,	1,25
Rose Culturist,	38
Johnson's Gardener's Dictionary, by Landreth,	1,50
Rural Economy, by Boussingault,	1,00
American Rose Culturist,	25
Bigelow's Plants of Boston,	1,25
Genera of Plants of the U. S., by Gray, 2 vols.	12,00
Gray's Botany,	2,00
Parnell's Chemistry,	1,00
New England Farmer, by Cole,	1,00
Ladies' Guide and Skilful Housewife, by Mrs. Abel,	25
Hive and Honey Bee, by Richardson,	25
Bee Keeper's Manual, by Miner,	50
Bird Fancier, by Browne, paper 25 cents,	50
Townley on Bees,	50
American Poultry Yard, by Browne,	1,00
American Poulterers' Companion, by Bement,	1,00
American Fowl Breeder, by Moore,	25
American Herd Book, by Allen,	3,00
American Shepherd, by Morrill,	1,00
Domestic Animals, by Allen,	75
Diseases of Animals, by Cole,	50
Hints to Sportsmen, by Lewis,	1,25
Dadd's Anatomy and Physiology of the Horse,	1.00
Mason's Farrier and Stud Book, by Skinner,	1,25
Management of Sheep, by Canfield,	1,00
Youatt on the Pig,	60
Knowlson's Complete Cow Doctor,	25
Horse Doctor,	25
Guenon's Treatise on Milch Cows,	38
Treatise on Hot Houses, by Leuchars,	1,00
Allen on the Grape,	1,00
Loudon's Encyclopædia,	10,00
Schenck's Text Book,	50
Breck's Book of Flowers,	75
Downing's Fruit and Fruit Trees,	1,50

For sale at the Publishers' prices by RUGGLES, NOURSE MASON & Co., Quincy Hall, (*over the Market,*) Boston.

April 3, 1852. tf

Pure Devon Stock.

COWS, HEIFERS, BULLS and BULL CALVES for sale.

Apply at Office of N. E. Farmer, or to the subscriber.

B. V. FRENCH,
Braintree, Mass.

Dec. 27, 1851. 1yr*

Carrot and Turnip Seed.

WE HAVE FOR SALE,

1000 lbs. Orange Carrot Seed;
500 lbs. Yellow Ruta Baga Turnip Seed;
500 lbs. White Flat Turnip Seed.
Also, 200 lbs. Mangel Wurtzel Beet Seed;
100 lbs. White Sugar Beet Seed;

All of which were grown expressly for us, and are of the best quality. RUGGLES, NOURSE, MASON & CO.,

May 29. tf* Over Quincy Market, Boston.

State Mutual Life Assurance Co.

OF WORCESTER.

GUARANTEE CAPITAL, $100,000.

Hon. JOHN DAVIS, President.

Hon. ISAAC DAVIS, } Vice
Hon. STEPHEN SALISBURY, } Presidents.

THIS Company was chartered in March, 1844, and commenced business on the first of June, 1845. Its business is conducted on the most economical principles.

The well considered and invariable policy of this Company has been to prefer the safety and mutuality of the assured to the showy advantages of a large number of policies, and an imposing amount of receipts. California risks have been uniformly declined, and the multiplication of policies in cities considered especially liable to cholera has not been encouraged.

The cash premiums of this company are calculated on the most approved tables of the probability of life, and at the low est rates which are deemed safe.

Pamphlets, explaining the principles and advantages of life assurance, with forms of application and rates of premium, may be had by application at the Office of the Company in Worcester, or of the Agents in all the principal towns in New England. CLARENDON HARRIS, Secretary.

Dec. 27, 1851. 1mf*

Mexican Guano.

A NEW ARTICLE is now offered to the Agriculturist and Dealers, under the above name, from its having been found near the Mexican coast. It has been analyzed by C. T. Jackson, M. D., State Assayer, Boston, Dr. David Stewart, of Baltimore, and others. Dr. Stewart says it contains the largest proportion of Phosphates he has ever met with in Guano.

The following are the result of the analysis made by C. T. Jackson, M. D.:

Water	23.40
Vegetable Matter	15.80
Soluble Salts (in Water) Phos. Soda	0.12
Phosphates of Lime and Magnesia	60.50
Insoluble Matter (Selex)	0.10
	99,92

The quality of this Guano as a rich fertilizer, and the great reduction in price compared with the Peruvian, is such as render it an object for the agriculturist and dealers to buy and give it a trial. It has been tried in the vicinity of Norfolk, Va., and much approved by the Farmers, those who are now buying and using of it freely. It may be obtained in lots to suit purchasers of A. D. WELD, 127 State Street, PHINEAS SPRAGUE & Co., T Wharf, or of P. A. STONE, who is the importer, and may be found at 15 Crescent Place, Boston, where also other information may be obtained respecting it. It is also for sale by Parker & White, 8 and 10 Gerrish Block, Blackstone Street, D. Prouty & Co., 19 North Market Street.

March 27. tf—*

Albany Drain Tile Works,

No. 60 LANCASTER STREET,—West of Medical College.

THE subscriber has now on hand, and will furnish to agriculturists, Horse Shoe and Sole Tiles of the most approved patterns, suitable for land drainage, of a superior quality, of over one foot in length. Horse Shoe Tile 2¾, 3½ and 4½ inches calibre, at $12, $15 and $18 ₱ 1000 pieces. Sole Tile 2¾ and 3½ inches calibre, at $12 and 18 per 1000 pieces. They are so formed as to admit water at every joint, draining land from 12 to 20 feet each side of the drain, being the cheapest and most durable article used. The great importance of thorough drainage is daily becoming more apparent.

Orders from a distance will receive prompt attention.

Albany, N. Y., April 10. 12w—*6 JOHN GOTT.

NEEDHAM'S

White Blackberry Plants.

THIS new variety of the Blackberry is intended expressly for the garden, being hardy, vigorous and extremely productive.

Persons favoring me with their orders, will have them grown from the original. The plants can be sent to any part of the country, packed in boxes, at $10 per dozen, or single plants $1.

For sale by Ruggles, Nourse, Mason & Co., and by the subscriber, J. S. NEEDHAM,

March 27, 1852. tf Danvers, Mass

New Store and New Goods.

THE subscriber would inform the inhabitants of Framingham and vicinity that he has opened a store in HOWE'S BLOCK, SOUTH FRAMINGHAM, and has for sale at the lowest prices for cash, an assortment of Family Groceries, Crockery Ware, Fancy Goods, Hardware, Paints, Oils, &c.

CHARLES J. POWER.

South Framingham, Nov. 1 1851. 44—tf

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Bolton Grey Fowls.

Eggs of these fowls, which are noted for their beautiful appearance, non-sitting and good laying qualities, warranted as pure as any in the country, can be obtained by applying (post-paid,) to GEORGE DORR, Dorchester, Mass.

☞ All orders promptly attended to.
June 5. tf

Suffolk Pigs.

Those who wish to procure SUFFOLK PIGS for breeders, (warranted pure and very fine,) can be supplied at short notice by applying at this office.
May 1, 1852. tf

Garden Seeds.

WE respectfully solicit the attention of purchasers of GARDEN SEEDS to our extensive stock, which we offer for sale. We have all the sorts of Vegetable Seeds that have proved worthy of cultivation; also, Grain, Grass and Flower Seeds. All the varieties are raised and selected expressly for our trade, and we do with confidence recommend them to all who desire to procure seeds that will prove true to their names.

☞ Catalogues gratis, on application.

RUGGLES, NOURSE, MASON & CO.,
Jan. 1. Over Quincy Market, Boston.

Ayrshire Calves.

For sale at moderate prices, two full blood Ayrshire Calves, one 9 months and the other 2 months old.

Apply at office of New England Farmer.
May 22, 1852. tf

McCORMICK'S PATENT

Virginia Reaper and Mower.

THE subscriber proposes selling the above machines upon the following *Terms of Warranty*, viz.: That they are well made, of good material, durable with proper care, and not liable to get out of order, and that the Reaper will cut one and one-half acres of grain per hour, and do its work *better* than ordinary cradling; and the Mower is warranted to cut one and one-fourth acres of grass, (of all kinds,) per hour, and do its work as well and as close to the ground, on smooth land, as ordinary mowing; otherwise the purchaser is under no obligation to pay for the machine.

Price for Reaper and Mower.....$150.
Price for Mower alone.....$105.

Payable after a satisfactory trial of machines.

☞ For further particulars, address (post-paid,)

A. D. HAGER, General Agent for
Proctorsville, Vt., May 1, 1852. 3w*1 New England.

The Massachusetts Militia,

AND all other Soldiers of 1812, '13 and '14, or in case of their death, their widows and minor children, can obtain Land Warrants, on application to the subscriber.

ILLINOIS LAND TITLES, granted to soldiers of the war of 1812, will be purchased.

Apply to EBEN SMITH, JR.,
Feb. 7, 1852. 6m 29 Court Street, Boston.

NEW ENGLAND FARMER

Is published on the first of every month, by JOHN RAYNOLDS and JOEL NOURSE, at Quincy Hall, South Market St., Boston.

SIMON BROWN, Editor.
FREDERICK HOLBROOK, } Associate
HENRY F. FRENCH, } Editors.

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☞ All subscriptions to commence with the volume, Jan. 1.

The FARMER, is devoted *exclusively to* Agriculture, Horticulture, and their kindred Arts and Sciences; making a neat volume of 576 octavo pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at the office of publication.

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The News and Miscellaneous departments under the charge of WILLIAM SIMONDS, will include a full and careful report of the news of the Markets, and the news of the week, such as Domestic, Foreign and Marine Intelligence, Congressional and Legislative proceedings, Temperance and Religious Intelligence, and a general variety of Literary and Miscellaneous matter, adapted to family reading, comprising more useful and valuable reading matter than any other Agricultural Newspaper published in New England. Everything of a hurtful or even doubtful tendency will be carefully excluded from its columns.

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The monthly contains nearly the same matter as the Agricultural department of the weekly.

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QUINCY HALL, SOUTH MARKET STREET, BOSTON.

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For any distance not exceeding 50 miles 5 cents *per year*.
Over 50, and not exceeding 300 miles..10 cents *per year*.
Over 300 " " 1000.....15 " "
Over 1000 " " 2000.....20 " "
Over 2000 " " 4000.....25 " "
Over 4000 " " .....30 " "

To prevent any misunderstanding, we quote the 16th section of the law of 3d March, 1845, which is as follows:

SEC. 16. And be it further enacted, that the term "Newspaper," herein before used, shall be, and the same is hereby defined to be, any printed publication, issued in numbers, consisting of not more than two sheets, and published at short stated intervals of not more than one month, conveying intelligence of passing events, and *bona fide extras* and *supplements* of such publication.